=> d l4 1-4 ibib abs

L4 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2002:65577 CAPLUS
TITLE: Constituents of Compositae plants III. Anti-tumor promoting effects and cytotoxic activity against human cancer cell lines of triterpene diols and triols from edible chrysanthemum flowers
AUTHOR(S): Ukiya, Motohiko; Akihisa, Toshihiro; Tokuda, Harukuni; Suzuki, Hiroyuki; Mukainaka, Teruo; Ichiishi, Eiichiro; Yasukawa, Ken; Kasahara, Yoshimasa; Nishino, Hoyoku
CORPORATE SOURCE: College of Science and Technology, Nihon University, Chiyoda-ku, Tokyo, 101-8308, Japan
SOURCE: Cancer Letters (Shannon, Ireland) (2002), 177(1), 7-12
CODEN: CALEDQ; ISSN: 0304-3835
PUBLISHER: Elsevier Science Ireland Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Fifteen pentacyclic triterpene diols and triols, consisting of: six taraxastanes, faradiol (1), heliantriol B0 (2), heliantriol C (3), 22.alpha.-methoxyfaradiol (4), arnidiol (5), and faradiol .alpha.-epoxide (6); five oleananes, maniladiol (7), erythrodiol (8), longispinogenin (9), coflodiol (10), and heliantriol A1 (11); two ursanes, brein (12) and uvaol (13); and two lupanes, calenduladiol (14) and heliantriol B2 (15), isolated from the non-saponifiable lipid fraction of the edible flower ext. of chrysanthemum (Chrysanthemum morifolium) were evaluated for their inhibitory effects on **Epstein-Barr** virus early antigen (EBV-EA) activation induced by the tumor promoter, 12-O-tetradecanoylphorbol-13-acetate, in Raji cells as a primary screening test for antitumor-promoters. All of the compds. tested showed inhibitory effects against EBV-EA activation with potencies either comparable with or stronger than that of **glycyrrhetic acid**, a known natural antitumor-promoter. Evaluation of the cytotoxic activity of six compds., 1-3 and 5-7, against human cancer cell lines revealed that compd. 5 possesses a wide range of cytotoxicity, with GI50 values (concn. that yields 50% growth) of mostly less than 6 .mu.M.
REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:709029 CAPLUS
DOCUMENT NUMBER: 136:95571
TITLE: Anti-tumor promoting effects of multiflorane-type triterpenoids and cytotoxic activity of karounidiol against human cancer cell lines
AUTHOR(S): Akihisa, T.; Tokuda, H.; Ichiishi, E.; Mukainaka, T.; Toriumi, M.; Ukiya, M.; Yasukawa, K.; Nishino, H.
CORPORATE SOURCE: Nihon University, College of Science and Technology, Tokyo, Chiyoda-ku, 101-8308, Japan
SOURCE: Cancer Letters (Shannon, Ireland) (2001), 173(1), 9-14
CODEN: CALEDQ; ISSN: 0304-3835
PUBLISHER: Elsevier Science Ireland Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Forty-nine multiflorane-type triterpenoids consisting of 11 compds. isolated from the seeds of Trichosanthes kirilowii (Cucurbitaceae) and 38 of their derivs. have been evaluated for their inhibitory effects on **Epstein-Barr** virus early antigen (EBV-EA) activation induced by the tumor promoter 12-O-tetradecanoylphorbol-13-acetate in Raji cells as a primary screening test for antitumor promoters. All of the compds. tested showed an inhibitory effect against EBV-EA activation, and among which 43 were revealed to possess remarkable activity with potencies

either comparable to or stronger than that of **glycyrrhetic acid**, a known natural antitumor promoter. Their structure-activity relation is discussed. Evaluation of the cytotoxic activity of karounidiol against human cancer cell lines exhibited cytotoxicity esp. against a human renal cancer.

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1995:441846 CAPLUS
DOCUMENT NUMBER: 122:305851
TITLE: Inhibitors of skin-tumor promotion. XIII. Inhibitory effects of euglobals and their related compounds on **Epstein-Barr** virus activation and on two-stage carcinogenesis of mouse skin tumors. (2)
AUTHOR(S): Takasaki, Midori; Konoshima, Takao; Kozuka, Mutsuo; Yoneyama, Koichi; Yoshida, Shigeo; Tokuda, Harukuni; Nishino, Hoyoku; Iwashima, Akio
CORPORATE SOURCE: Kyoto Pharm. Univ., Kyoto, 607, Japan
SOURCE: Biological & Pharmaceutical Bulletin (1995), 18(2), 288-94
CODEN: BPBLEO; ISSN: 0918-6158
PUBLISHER: Pharmaceutical Society of Japan
DOCUMENT TYPE: Journal
LANGUAGE: English

AP 501.B56

AB One hundred and fifteen synthesized mono, di, and trihydroxybenzamide and thiobenzamide derivs. having structures related to euglobals were examd. for their inhibitory effects on **Epstein-Barr** virus (EBV) activation by 12-O-tetradecanoylphorbol-13-acetate (TPA) as a primary screening test for anti-tumor-promoters. In general, 3-acyl-2,4,6-trihydroxybenzamide and 3-acyl-2,4,6-trihydroxythiobenzamide derivs. exhibited strong or moderate activities, and the latter compds. were less cytotoxic than the former. Meanwhile, little or no activity was obsd. with mono and dihydroxybenzamide and dihydroxythiobenzamide derivs. Structural requirements for the activities of these compds. have been discussed in detail. Among the above compds., compds. 36 and 73, which were significantly active on the inhibition of EBV activation, were investigated using a two-stage mouse skin carcinogenesis test induced by 7,12-dimethylbenz[a]anthracene (DMBA) and TPA. The results of the in vivo test showed that both compds. have a stronger inhibitory effect than that of the well-known anti-tumor-promoter, **glycyrrhetic acid**. These results suggested that the two compds. might be valuable as anti-tumor-promoters in chem. carcinogenesis.

L4 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1994:153711 CAPLUS
DOCUMENT NUMBER: 120:153711
TITLE: Tumor promotion inhibitors containing **glycyrrhetic acid** monoglucuronide
INVENTOR(S): Kozuka, Mutsuo; Tokuda, Harukuni; Mizutani, Kenji; Tamura, Kokichi; Kuramoto, Takashi
PATENT ASSIGNEE(S): Maruzen Seiyaku Kk, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05306228	A2	19931119	JP 1992-129884	19920424
JP 3163161	B2	20010508		

AB Tumor promotion inhibitors contain **glycyrrhetic acid**

monoglucuronide (I) or its water-sol. salts as active ingredient. TPA-induced formation of **Epstein-Barr** virus early antigen was inhibited by I [at 1000 (by mol.) to TPA] by 100%, vs. 84.4% by **glycyrrhetic acid**.

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     (FILE 'HOME' ENTERED AT 11:22:06 ON 12 SEP 2002)

     FILE 'CAPLUS' ENTERED AT 11:22:27 ON 12 SEP 2002
L1          530 S GLYCYRRHETIC ACID
L2          759 S GLYCYRRHIZIC ACID
L3         1396 S GLYCYRRHIZIN
L4            4 S L1 AND EPSTEIN BARR

=> s l2 and epstein barr
           9386 EPSTEIN
           8962 BARR
              3 BARRS
           8965 BARR
                  (BARR OR BARRS)
           8633 EPSTEIN BARR
                  (EPSTEIN(W)BARR)
L5            2 L2 AND EPSTEIN BARR

=> d l5 1-2 ibib abs

L5   ANSWER 1 OF 2  CAPLUS  COPYRIGHT 2002 ACS
ACCESSION NUMBER:         2001:863496  CAPLUS
DOCUMENT NUMBER:          135:366719
TITLE:                    Composition for and method of treatment of Kaposi's
                          sarcoma and Kaposi's sarcoma-assocd. herpesvirus
                          infection using triterpenoids
INVENTOR(S):              Flore, Ornella
PATENT ASSIGNEE(S):       USA
SOURCE:                   U.S., 16 pp.
                          CODEN: USXXAM
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.        KIND  DATE           APPLICATION NO.  DATE
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     US 6323183         B1   20011127       US 1999-324473   19990602
     US 2002091158      A1   20020711       US 2001-976838   20011015
PRIORITY APPLN. INFO.:                   US 1999-324473   A3 19990602
AB   Methods and compns. for treating Kaposi's sarcoma and Epstein
     Barr virus using a a therapeutic deriv. of a triterpenoid acid and
     derivs. thereof are disclosed.  The present invention relates to the use
     of a triterpenoid preferably a glycyrrhizic acid
     (glycyrrhizin) to inhibit the transcription of viral latent genes and the
     consequential viral latent cycle at doses that do not affect the
     uninfected cells.  Using glycyrrhizic acid and
     derivs., the Kaposi's sarcoma-assocd. herpesvirus (KSHV) infected cells
     are completely killed six days after treatment.
REFERENCE COUNT:          8     THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS
                                RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5   ANSWER 2 OF 2  CAPLUS  COPYRIGHT 2002 ACS
ACCESSION NUMBER:         1998:763541  CAPLUS
DOCUMENT NUMBER:          130:172862
TITLE:                    Epstein-Barr virus DNA polymerase
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inhibitors from Chinese herbs: use of preliminary screening, physicochemical properties and taxonomy for new lead compounds generation
AUTHOR(S): Lien, Eric J.; Bui, Huynh-Hoa; Ren, Shijun; Liu, Karin C. S. Chen; Lin, Mei-Tsu; Chiou, Juo-Farn
CORPORATE SOURCE: Department of Pharmaceutical Sciences, School of Pharmacy, University of Southern California, Los Angeles, CA, 90033, USA
SOURCE: Chinese Pharmaceutical Journal (Taipei) (1998), 50(4), 233-247
CODEN: CPHJEP; ISSN: 1016-1015
PUBLISHER: Pharmaceutical Society of Republic of China
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A paradigm of combining preliminary screening data, SAR, functional group and taxonomical analyses has been proposed for new lead compds. generation. Based on the screening data of 38 natural products, a quaternary ammonium deriv. (coptisine chloride), a sesquiterpene with an .alpha.,.beta.-unsatd. lactone function and an isoflavonoid (daidzein) have been found to be most active. Based on the analyses of overall structures, physicochem. properties and taxonomical relationships, 47 related compds. and six families of plants are suggested for further investigation. Due to the inherent biodiversity, nature may still be the best source for new drug discovery.
REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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FILE 'CAPLUS' ENTERED AT 11:22:27 ON 12 SEP 2002
L1 530 S GLYCYRRHETIC ACID
L2 759 S GLYCYRRHIZIC ACID
L3 1396 S GLYCYRRHIZIN
L4 4 S L1 AND EPSTEIN BARR
L5 2 S L2 AND EPSTEIN BARR

=> s l3 and epstein barr
9386 EPSTEIN
8962 BARR
3 BARRS
8965 BARR
(BARR OR BARRS)
8633 EPSTEIN BARR
(EPSTEIN(W)BARR)
L6 3 L3 AND EPSTEIN BARR

=> d l6 1-3 ibib abs

L6 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2002:640085 CAPLUS
TITLE: Cancer-chemopreventive effects of natural sweeteners and related compounds
AUTHOR(S): Konoshima, Takao; Takasaki, Midori
CORPORATE SOURCE: Kyoto Pharmaceutical University, Kyoto, 607-8414, Japan
SOURCE: Pure and Applied Chemistry (2002), 74(7), 1309-1316
CODEN: PACHAS; ISSN: 0033-4545
PUBLISHER: International Union of Pure and Applied Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
AB To search for possible cancer-chemopreventive agents from natural

resources, several natural sweeteners were screened by the in vitro assay indicated by the inhibitory effects of **Epstein-Barr** virus early antigen (EBV-EA) induction. Of active compds. that showed the remarkable inhibitory effects on the EBV-EA induction, stevioside, from the leaves of Stevia rebaudiana, and mogroside V, from the fruits of Momordica grosvenori, exhibited significant inhibitory effects on the two-stage mouse skin carcinogenesis in vivo induced by 7,12-dimethylbenz[a]anthracene (DMBA) and 12-O-tetradecanoylphorbol-13-acetate (TPA). The inhibitory effect of stevioside is stronger than that of **glycyrrhizin**, which had been known as an antitumor-promoter in chem. carcinogenesis. Furthermore, stevioside also inhibited mouse skin carcinogenesis initiated by peroxynitrite. These results suggest that stevioside and mogroside V might be valuable as chemopreventive agents for chem. carcinogenesis.

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:863496 CAPLUS
DOCUMENT NUMBER: 135:366719
TITLE: Composition for and method of treatment of Kaposi's sarcoma and Kaposi's sarcoma-assocd. herpesvirus infection using triterpenoids
INVENTOR(S): Flore, Ornella
PATENT ASSIGNEE(S): USA
SOURCE: U.S., 16 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

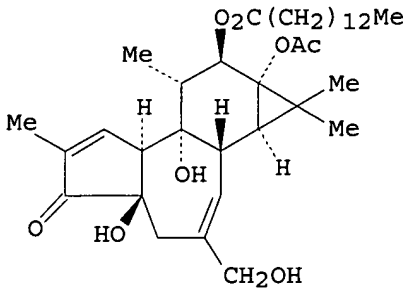
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6323183	B1	20011127	US 1999-324473	19990602
US 2002091158	A1	20020711	US 2001-976838	20011015

PRIORITY APPLN. INFO.: US 1999-324473 A3 19990602

AB Methods and compns. for treating Kaposi's sarcoma and **Epstein Barr** virus using a a therapeutic deriv. of a triterpenoid acid and derivs. thereof are disclosed. The present invention relates to the use of a triterpenoid preferably a glycyrrhizic acid (**glycyrrhizin**) to inhibit the transcription of viral latent genes and the consequential viral latent cycle at doses that do not affect the uninfected cells. Using glycyrrhizic acid and derivs., the Kaposi's sarcoma-assocd. herpesvirus (KSHV) infected cells are completely killed six days after treatment.

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1983:401608 CAPLUS
DOCUMENT NUMBER: 99:1608
TITLE: Inhibition of 12-O-tetradecanoylphorbol-13-acetate-induced induction in **Epstein-Barr** virus early antigen in Raji cells
AUTHOR(S): Okamoto, Hitoshi; Yoshida, Daisuke; Mizusaki, Shigenobu
CORPORATE SOURCE: Cent. Res. Inst., Japan Tob. and Salt Public Corp., Yokohama, 227, Japan
SOURCE: Cancer Lett. (Shannon, Irel.) (1983), 19(1), 47-53
CODEN: CALEDQ; ISSN: 0304-3835
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



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AB Retinol [68-26-8], 5 flavonoids, 3 steroids, and 7 sweetening agents were studied for their effects on TPA (I) [16561-29-8]-induced early antigen (EA) of **Epstein-Barr** virus (EBV) in Raji cells. Concomitant treatment of Raji cells with TPA and retinol inhibited EA induction. Among flavonoids, quercetin [117-39-5] resulted in effective inhibition of EA induction by TPA and .alpha.-naphthoflavone [604-59-1] showed a weakly inhibitory effect. None of the other flavonoids such as rutin [153-18-4], catechin [154-23-4] and .beta.-naphthoflavone [6051-87-2] affected the induction of EBV-EA by TPA. .beta.-Estradiol [50-28-2] obviously inhibited EBV-EA induction by TPA, but hydrocortisone [50-23-7] did not show any inhibitory effect. Glycyrrhetinic acid, steviol, phyllodulcin and perrillartine also strongly inhibited EBV-EA induction. **Glycyrrhizin** [1405-86-3] and stevioside [57817-89-7], glycosides of glycyrrhetinic acid [471-53-4] and steviol [471-80-7], did not inhibit the induction of EBV-EA by TPA. Some of these inhibitors may be effective in inhibiting the in vivo tumor promotion by TPA.

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FILE 'CAPLUS' ENTERED AT 11:22:27 ON 12 SEP 2002

L1 530 S GLYCYRRHETIC ACID
L2 759 S GLYCYRRHIZIC ACID
L3 1396 S GLYCYRRHIZIN
L4 4 S L1 AND EPSTEIN BARR
L5 2 S L2 AND EPSTEIN BARR
L6 3 S L3 AND EPSTEIN BARR

L2 ANSWER 33 OF 33 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1992:442450 CAPLUS
DOCUMENT NUMBER: 117:42450
TITLE: Modulation of mutagenesis, DNA binding, and metabolism of aflatoxin B1 by licorice compounds
AUTHOR(S): Ngo, Heidi Nhanhau; Teel, Robert W.; Lau, Benjamin H. S.
CORPORATE SOURCE: Sch. Med., Loma Linda Univ., Loma Linda, CA, 92350, USA
SOURCE: Nutrition Research (New York, NY, United States) (1992), 12(2), 247-57
CODEN: NTRSDC; ISSN: 0271-5317
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Three licorice compds. (ext. 348, carbenoxolone, and **glycyrrhetinic acid**) were studied for their effects on aflatoxin B1 (AFB1)-induced mutagenesis using Salmonella typhimurium TA-100 as the bacterial tester strain and rat liver 9000 .times. g supernatant (S-9) as the metabolic activation system. The effects of these compds. on [3H]AFB1 binding to calf thymus DNA were assessed. Organosol. and water-sol. metabolites of [3H]AFB1 were extd. and analyzed by reversed-phase HPLC and alumina column liq. chromatog. All 3 compds. exhibited a concn.-dependent inhibition of S-9-mediated mutagenesis induced by AFB1. These compds. also significantly inhibited AFB1 binding to DNA and significantly decreased the activation of AFB1 to mutagenic/carcinogenic metabolites. Thus, licorice compds. possess antimutagenic and, potentially, **cancer** chemopreventive

L2 ANSWER 33 OF 33 CAPLUS COPYRIGHT 2002 ACS
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CORPORATE SOURCE: Sch. Med., Loma Linda Univ., Loma Linda, CA, 92350, USA
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CODEN: NTRSDC; ISSN: 0271-5317
DOCUMENT TYPE: Journal
LANGUAGE: English

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L2 ANSWER 22 OF 33 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1995:421550 CAPLUS
DOCUMENT NUMBER: 122:204693
TITLE: Effect of **glycyrrhetinic acid** on DNA damage and unscheduled DNA synthesis induced by benzo[a]pyrene
AUTHOR(S): Chen, X. G.; Han, R.
CORPORATE SOURCE: Inst. Mater. Med., Chinese Acad. Med. Sci., Bejing, 100050, Peop. Rep. China
SOURCE: Yaoxue Xuebao (1994), 29(10), 725-9
CODEN: YHHPAL; ISSN: 0513-4870
PUBLISHER: Chinese Academy of Medical Sciences, Institute of Materia Media
DOCUMENT TYPE: Journal
LANGUAGE: Chinese

AB **Glycyrrhetinic acid** (GA) is an active component of Glycyrrhiza uralensis Fisch. In this study, the effects of **glycyrrhetinic acid** on DNA damage and unscheduled DNA synthesis induced by benzopyrene were studied. Mouse ear edema was visible 6 h after topical application of a single dose of croton oil. A topical application of croton oil on the back of ICR mice for 5 h, elevated epidermal ornithine decarboxylase (ODC) activity. The administration of **glycyrrhetinic acid** (50-200 mg.cntdot.kg-1.cntdot.d-1) to animals for 3 days caused an 20%-80% inhibition of epidermal ornithine decarboxylase activity in croton oil-treated animals. Benzopyrene caused DNA damage and unscheduled DNA synthesis in the Chinese hamster lung cell line. **Glycyrrhetinic acid** was found to protect against the DNA damage induced by benzopyrene. At a concn. of 5 .mu.g.cntdot.mL-1, **glycyrrhetinic acid** exhibited 70% protection. At 20.mu.g.cntdot.mL-1, this action was more potent and approached 80%. Thus, **glycyrrhetinic acid** has effective anti-initiating and anti-promoting activities and could be used for **cancer** chemopreventive purposes.

L2 ANSWER 22 OF 33 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1995:421550 CAPLUS
DOCUMENT NUMBER: 122:204693
TITLE: Effect of **glycyrrhetinic acid** on DNA damage and unscheduled DNA synthesis induced by benzo[a]pyrene
AUTHOR(S): Chen, X. G.; Han, R.
CORPORATE SOURCE: Inst. Mater. Med., Chinese Acad. Med. Sci., Bejing, 100050, Peop. Rep. China
SOURCE: Yaoxue Xuebao (1994), 29(10), 725-9
CODEN: YHHPAL; ISSN: 0513-4870
PUBLISHER: Chinese Academy of Medical Sciences, Institute of Materia Media
DOCUMENT TYPE: Journal
LANGUAGE: Chinese

AB **Glycyrrhetinic acid** (GA) is an active component of Glycyrrhiza uralensis Fisch. In this study, the effects of **glycyrrhetinic acid** on DNA damage and unscheduled DNA synthesis induced by benzopyrene were studied. Mouse ear edema was visible 6 h after topical application of a single dose of croton oil. A topical application of croton oil on the back of ICR mice for 5 h, elevated epidermal ornithine decarboxylase (ODC) activity. The administration of **glycyrrhetinic acid** (50-200 mg.cntdot.kg-1.cntdot.d-1) to animals for 3 days caused an 20%-80% inhibition of epidermal ornithine decarboxylase activity in croton oil-treated animals. Benzopyrene caused DNA damage and unscheduled DNA synthesis in the Chinese hamster lung cell line. **Glycyrrhetinic acid** was found to protect against the DNA damage induced by benzopyrene. At a concn. of 5 .mu.g.cntdot.mL-1, **glycyrrhetinic acid** exhibited 70% protection. At 20.mu.g.cntdot.mL-1, this action was more potent and approached 80%. Thus, **glycyrrhetinic acid** has effective anti-initiating and anti-promoting activities and could be used for **cancer** chemopreventive purposes.

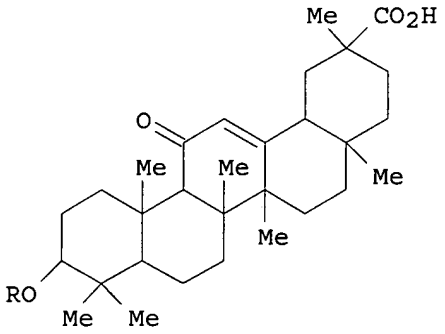
L2 ANSWER 15 OF 33 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1997:695937 CAPLUS
DOCUMENT NUMBER: 127:325854
TITLE: Licorice: absorption, distribution, metabolism and **cancer** chemoprevention
AUTHOR(S): Mehta, Rajendra G.; Steele, Vernon; Pierson, Herbert; Constantinou, Andreas; Moon, Richard C.
CORPORATE SOURCE: Department of Surgical Oncology, Chemoprevention Program, University of Illinois, Chicago, USA
SOURCE: Nutraceuticals: Designer Foods III: Garlic, Soy and Licorice, [Course on Designer Foods, Proceedings], 3rd, Washington, D. C., May 23-25, 1994 (1997), 265-278. Editor(s): Lachance, Paul A. Food & Nutrition Press: Trumbull, Conn.
CODEN: 65EOA3
DOCUMENT TYPE: Conference; General Review
LANGUAGE: English

AB A review with 30 refs. This is a comprehensive chapter describing the bioavailability and metab., as well as dose tolerance of 18-.beta.-**glycyrrhetinic acid** (GA), an active component of licorice roots. In recent years, attention has been focused to consider licorice as a possible **cancer** chemopreventive agent. Results summarized in this report suggest that 18-.beta.-GA and carbenoxolone are effective chemopreventive agents against carcinogen-induced preneoplastic lesions in mouse mammary gland organ culture. Moreover, both carbenoxolone and GA inhibited chem.-induced mammary carcinogenesis in rats. Further studies also have shown that while GA induces estrogen receptor modestly, it dramatically down-regulates progesterone receptors in uterus and mammary glands. Since there was a potent inhibition of progesterone receptors by GA, it may have effects towards other physiol. events related to progesterone receptors.

L2 ANSWER 9 OF 33 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1998:794878 CAPLUS
DOCUMENT NUMBER: 130:90528
TITLE: **Glycyrrhetinic acid** derivatives as inhibitors for HSP47 protein synthesis
INVENTOR(S): Kiyosuke, Yoichi; Tsuzuki, Tomoko; Morino, Masayoshi; Yoshikumi, Chikao
PATENT ASSIGNEE(S): Kureha Chemical Industry Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 18 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10330256	A2	19981215	JP 1997-157889	19970530

OTHER SOURCE(S): MARPAT 130:90528
GI



I

AB **Glycyrrhetinic acid** derivs. including active principles from licorice exts. (I; R = H, monosugar or di-sugar residue, R1-CO- (R1 = H, C1-3 alkyl), HOOC-CO-, HOOC-R2CO- (R2 = C1-3 alkylene), amino acid residue with protected .alpha.-amino group) are claimed as inhibitors for HSP47 protein synthesis and collagen formation and are useful as health foods or drugs for prevention and treatment of diseases related to increases in extracellular matrix formation e.g. liver cirrhosis, interstitial lung disease, chronic renal disease, heart hypertrophy, and **cancer** metastasis. The effect of **glycyrrhetinic acid** on HSP47 protein expression was tested in human **cancer** cell lines.

L2 ANSWER 14 OF 33 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1997:695938 CAPLUS
DOCUMENT NUMBER: 127:326135
TITLE: **Cancer** prevention by licorice
AUTHOR(S): Nishino, Hoyoku
CORPORATE SOURCE: Cancer Prevention Division, National Cancer Center Research Institute, Tokyo, 104, Japan
SOURCE: Nutraceuticals: Designer Foods III: Garlic, Soy and Licorice, [Course on Designer Foods, Proceedings], 3rd, Washington, D. C., May 23-25, 1994 (1997), 279-283. Editor(s): Lachance, Paul A. Food & Nutrition Press: Trumbull, Conn.
CODEN: 65EOA3
DOCUMENT TYPE: Conference
LANGUAGE: English

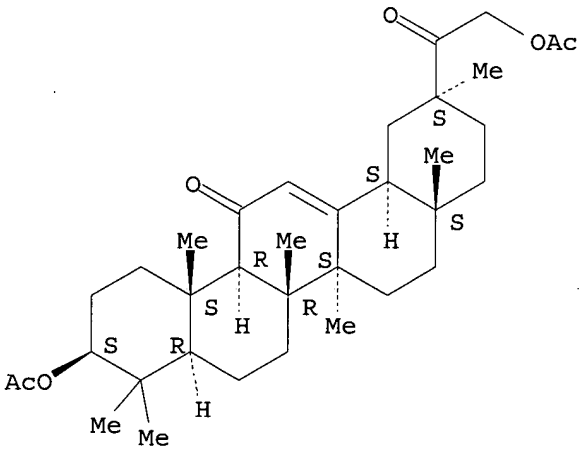
AB Licorice (sweetening material) has been demonstrated to have various pharmacol. activities, which are widely applied in Chinese medicine. In the present study, a new aspect in the disease preventive activity of licorice, i.e., a preventive effect on carcinogenesis, is demonstrated. Glycyrrhizin and its aglycon **glycyrrhetinic acid** showed antitumorigenic activity in in vivo expts. Licochalcone A, a constituent in licorice, was also demonstrated to suppress tumorigenesis. Besides licorice, Allium vegetables, such as garlic, are also commonly used as medicinal materials in Asia, and some of their exts. have potent anticarcinogenic activity. Thus, the use in combination of constituents prepd. from licorice and Allium vegetables might be valuable for the creation of new designer foods for **cancer** prevention.

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4 REFERENCES IN FILE CA (1967 TO DATE)
4 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L3 ANSWER 35 OF 41 REGISTRY COPYRIGHT 2002 ACS
RN 10427-91-5 REGISTRY
CN 30-Nor-18.alpha.-olean-12-en-11-one, 20-glycoloyl-3.beta.-hydroxy-, diacetate (7CI, 8CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 13(2H)-Picenone, 2-glycoloyl-1,3,4,4a,5,6,6a,6b,7,8,8a,9,10,11,12,12a,12b, 14b-octadecahydro-10-hydroxy-2,4a,6a,6b,9,9,12a-heptamethyl-, diacetate (6CI)
FS STEREOSEARCH
MF C35 H52 O6
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS
(*File contains numerically searchable property data)

Absolute stereochemistry.

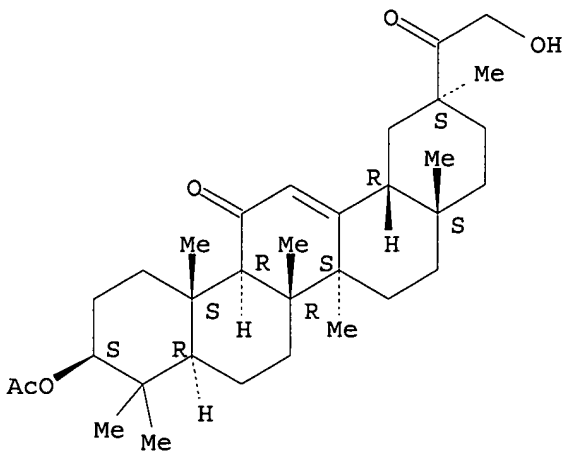


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)
2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L3 ANSWER 36 OF 41 REGISTRY COPYRIGHT 2002 ACS
RN 10389-31-8 REGISTRY
CN 30-Norolean-12-en-11-one, 20-glycoloyl-3.beta.-hydroxy-, acetate (7CI, 8CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C33 H50 O5
LC STN Files: BEILSTEIN*, CAOLD
(*File contains numerically searchable property data)

Absolute stereochemistry.

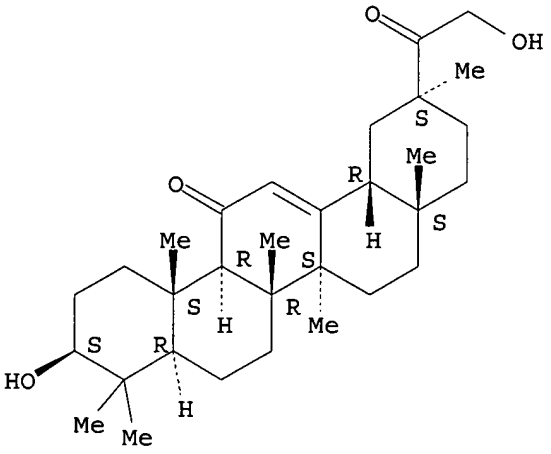


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L3 ANSWER 37 OF 41 REGISTRY COPYRIGHT 2002 ACS
RN 10376-63-3 REGISTRY
CN 30-Norolean-12-en-11-one, 20-glycoloyl-3.beta.-hydroxy- (7CI, 8CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C31 H48 O4
LC STN Files: CAOLD

Absolute stereochemistry.



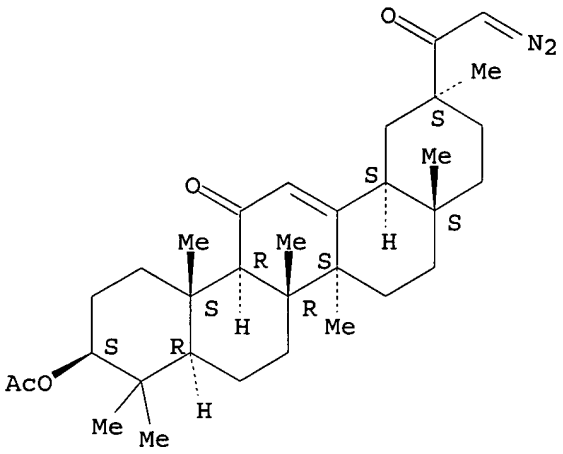
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L3 ANSWER 38 OF 41 REGISTRY COPYRIGHT 2002 ACS
RN 10301-85-6 REGISTRY
CN 30-Nor-18.alpha.-olean-12-en-11-one, 20-(diazoacetyl)-3.beta.-hydroxy-, acetate (ester) (8CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 30-Nor-18.alpha.-olean-12-en-11-one, 20-(diazoacetyl)-3.beta.-hydroxy-, acetate (7CI)
FS STEREOSEARCH

MF C33 H48 N2 O4
LC STN Files: CA, CAOLD, CAPLUS

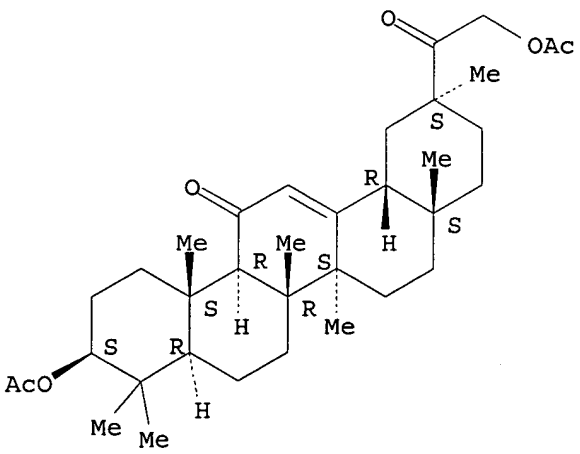
Absolute stereochemistry.



1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L3 ANSWER 39 OF 41 REGISTRY COPYRIGHT 2002 ACS
RN 10301-79-8 REGISTRY
CN 30-Norolean-12-en-11-one, 3-(acetyloxy)-20-[(acetyloxy)acetyl]-, (3.beta.,20.beta.)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 30-Norolean-12-en-11-one, 20-glycoloyl-3.beta.-hydroxy-, diacetate (7CI, 8CI)
OTHER NAMES:
CN 3.beta.-Acetoxy-30-acetoxymethylolean-12-ene-11,30-dione
FS STEREOSEARCH
DR 15039-53-9
MF C35 H52 O6
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS
(*File contains numerically searchable property data)

Absolute stereochemistry.

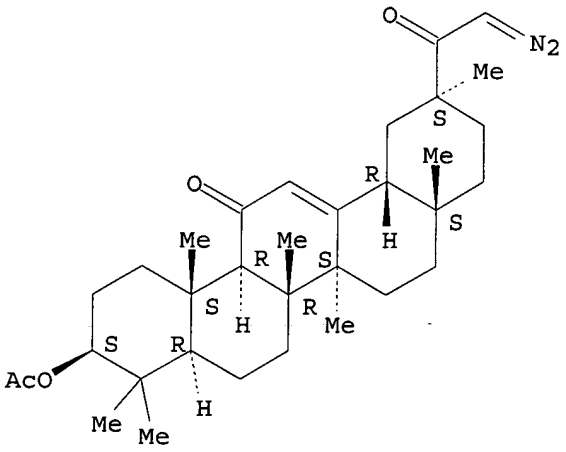


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1967 TO DATE)
2 REFERENCES IN FILE CAPLUS (1967 TO DATE)
3 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L3 ANSWER 40 OF 41 REGISTRY COPYRIGHT 2002 ACS
RN 10301-78-7 REGISTRY
CN 30-Norolean-12-en-11-one, 3-(acetyloxy)-20-(diazoacetyl)-, (3.beta.,20.beta.)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 30-Norolean-12-en-11-one, 20-(diazoacetyl)-3.beta.-hydroxy-, acetate (7CI)
CN 30-Norolean-12-en-11-one, 20-(diazoacetyl)-3.beta.-hydroxy-, acetate (ester) (8CI)
FS STEREOSEARCH
MF C33 H48 N2 O4
LC STN Files: CA, CAOLD, CAPLUS

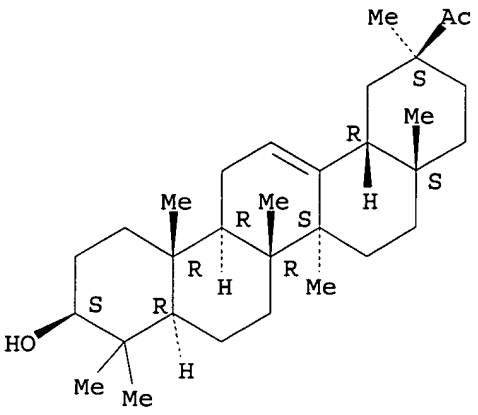
Absolute stereochemistry.



2 REFERENCES IN FILE CA (1967 TO DATE)
2 REFERENCES IN FILE CAPLUS (1967 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L3 ANSWER 41 OF 41 REGISTRY COPYRIGHT 2002 ACS
RN 10246-88-5 REGISTRY
CN Ethanone, 1-[(3.beta.,20.beta.)-3-hydroxy-30-norolean-12-en-20-yl]- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 30-Noroleanane, ethanone deriv.
CN Ketone, 3.beta.-hydroxy-30-norolean-12-en-20-yl methyl (7CI, 8CI)
OTHER NAMES:
CN 3.beta.-Hydroxy-30-methyl-18.beta.-olean-12-en-30-one
FS STEREOSEARCH
MF C31 H50 O2
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, IFICDB, IFIPAT, IFIUDB
(*File contains numerically searchable property data)

Absolute stereochemistry.



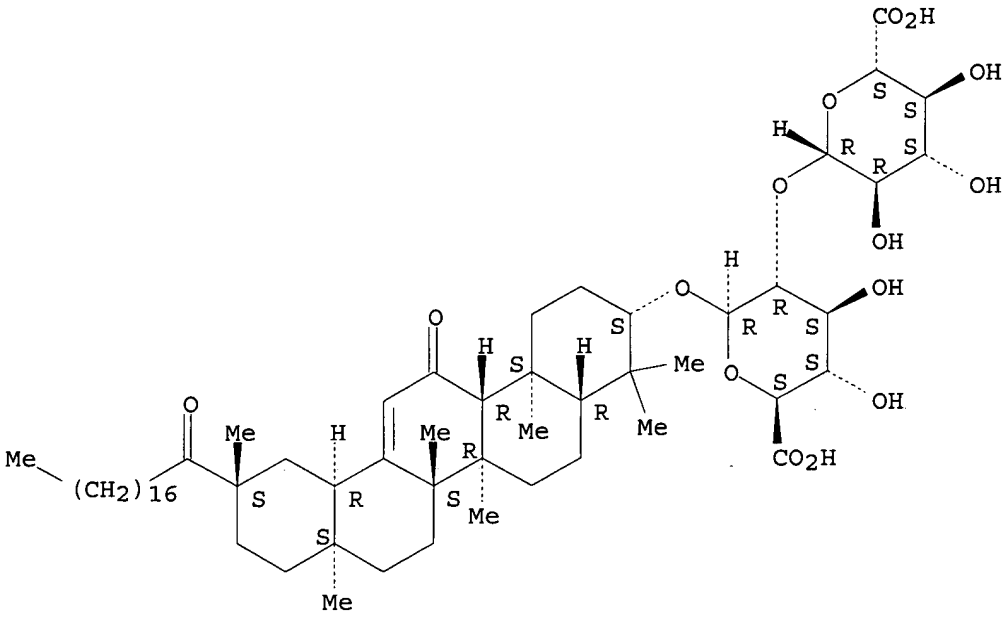
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1967 TO DATE)
2 REFERENCES IN FILE CAPLUS (1967 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

> d l3 1-41

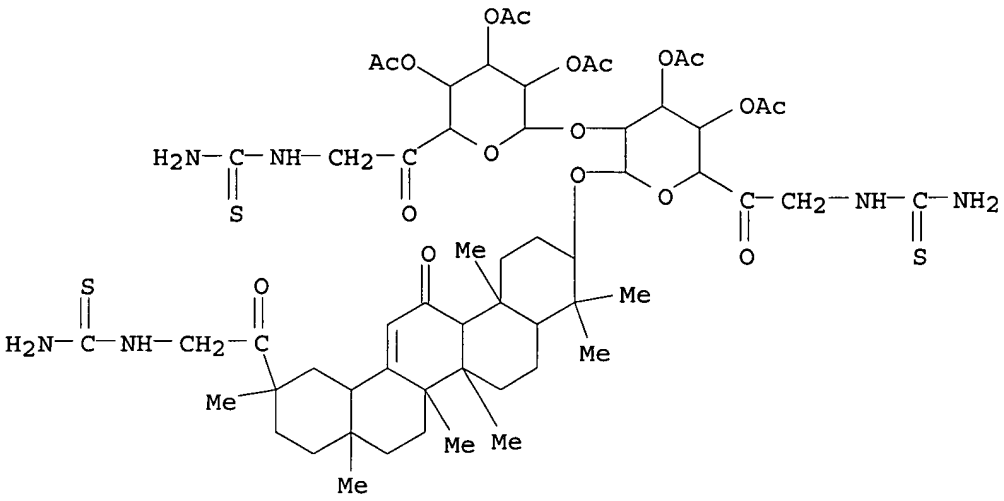
L3 ANSWER 1 OF 41 REGISTRY COPYRIGHT 2002 ACS
RN 213815-88-4 REGISTRY
CN .beta.-D-Glucopyranosiduronic acid, (3.beta.,20.beta.)-29-(octadecyloxy)-11,29-dioxoolean-12-en-3-yl 2-O-.beta.-D-glucopyranuronosyl- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C59 H96 O15
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.



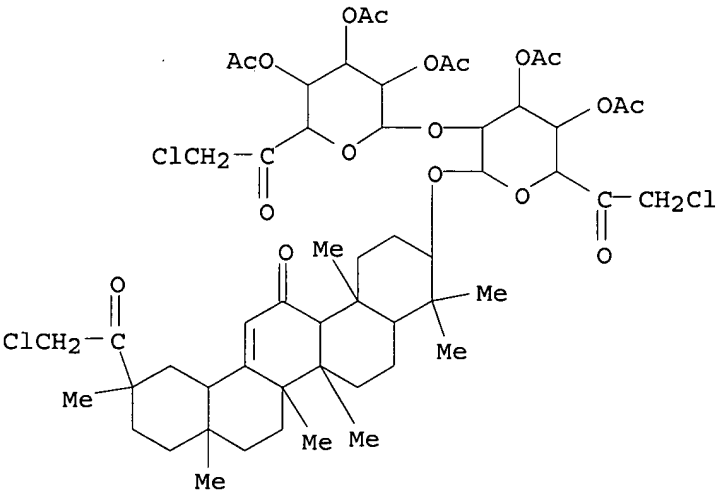
1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L3 ANSWER 2 OF 41 REGISTRY COPYRIGHT 2002 ACS
RN 156130-77-7 REGISTRY
CN Thiourea, [2-[(3.beta.,20.beta.)-3-[[3,4-di-O-acetyl-7-[(aminothioxomethyl)amino]-7-deoxy-2-O-[2,3,4-tri-O-acetyl-7-[(aminothioxomethyl)amino]-7-deoxy-.beta.-D-gluco-heptopyranos-6-ulos-1-yl]-.alpha.-D-gluco-heptopyranos-6-ulos-1-yl]oxy]-11-oxo-30-norolean-12-en-20-yl]-2-oxoethyl]- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 30-Noroleanane, thiourea deriv.
MF C58 H84 N6 O18 S3
SR CA
LC STN Files: CA, CAPLUS



1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

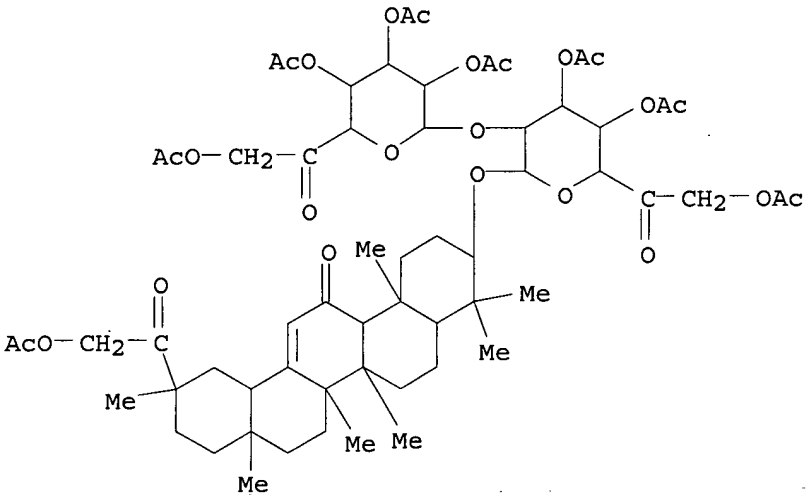
L3 ANSWER 3 OF 41 REGISTRY COPYRIGHT 2002 ACS
RN 156126-62-4 REGISTRY
CN .alpha.-D-gluco-Heptopyranosid-6-ulose, (3.beta.,20.beta.)-20-(chloroacetyl)-11-oxo-30-norolean-12-en-3-yl 7-chloro-7-deoxy-2-O-(2,3,4-tri-O-acetyl-7-chloro-7-deoxy-.beta.-D-gluco-heptopyranos-6-ulos-1-yl)-, diacetate (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 30-Noroleanane, .alpha.-D-gluco-heptopyranosid-6-ulose deriv.
MF C55 H75 Cl3 O18
SR CA
LC STN Files: CA, CAPLUS



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

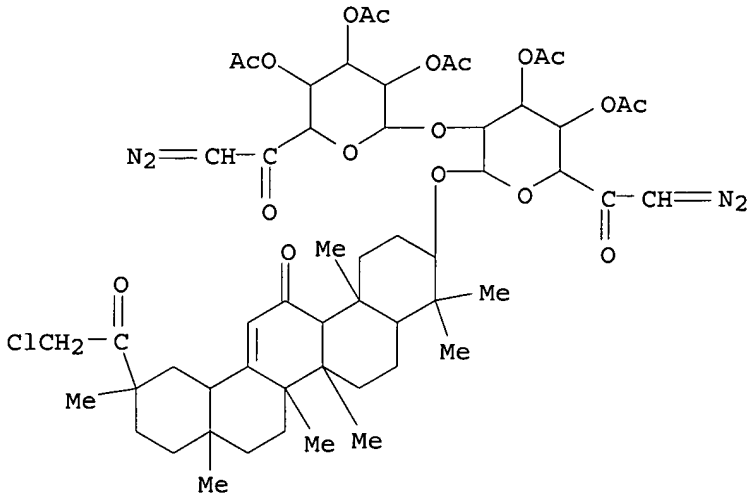
L3 ANSWER 4 OF 41 REGISTRY COPYRIGHT 2002 ACS
RN 156126-61-3 REGISTRY
CN .alpha.-D-gluco-Heptopyranosid-6-ulose, (3.beta.,20.beta.)-20-[(acetyloxy)acetyl]-11-oxo-30-norolean-12-en-3-yl 2-O-(2,3,4,7-tetra-O-acetyl-.beta.-D-gluco-heptopyranos-6-ulos-1-yl)-, triacetate (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 30-Noroleanane, .alpha.-D-gluco-heptopyranosid-6-ulose deriv.
MF C61 H84 O24
SR CA
LC STN Files: CA, CAPLUS



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

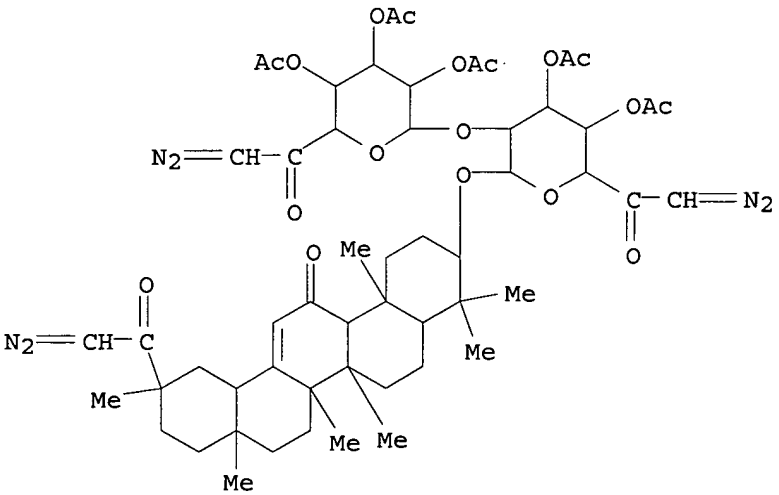
1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L3 ANSWER 5 OF 41 REGISTRY COPYRIGHT 2002 ACS
RN 156126-60-2 REGISTRY
CN .alpha.-D-gluco-Heptopyranosid-6-ulose, (3.beta.,20.beta.)-20-(chloroacetyl)-11-oxo-30-norolean-12-en-3-yl 7-deoxy-7-diazo-2-O-(2,3,4-tri-O-acetyl-7-deoxy-7-diazo-.beta.-D-gluco-heptopyranos-6-ulos-1-yl)-, 3,4-diacetate (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 30-Noroleanane, .alpha.-D-gluco-heptopyranosid-6-ulose deriv.
MF C55 H73 Cl N4 O18
SR CA
LC STN Files: CA, CAPLUS



1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L3 ANSWER 6 OF 41 REGISTRY COPYRIGHT 2002 ACS
RN 156126-59-9 REGISTRY
CN .alpha.-D-gluco-Heptopyranosid-6-ulose, (3.beta.,20.beta.)-20-(diazoacetyl)-11-oxo-30-norolean-12-en-3-yl 7-deoxy-7-diazo-2-O-(2,3,4-tri-O-acetyl-7-deoxy-7-diazo-.beta.-D-gluco-heptopyranos-6-ulos-1-yl)-, 3,4-diacetate (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 30-Noroleanane, .alpha.-D-gluco-heptopyranosid-6-ulose deriv.
MF C55 H72 N6 O18
SR CA
LC STN Files: CA, CAPLUS



1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L3 ANSWER 7 OF 41 REGISTRY COPYRIGHT 2002 ACS
RN 156126-32-8 REGISTRY
CN .alpha.-D-gluco-Heptopyranosid-6-ulose, (3.beta.,20.beta.)-20-

[(hexylamino)acetyl]-11-oxo-30-norolean-12-en-3-yl 7-deoxy-7-(hexylamino)-2-O-[2,3,4-tri-O-acetyl-7-deoxy-7-(hexylamino)-.beta.-D-gluco-heptopyranos-6-ulos-1-yl]-, 3,4-diacetate (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

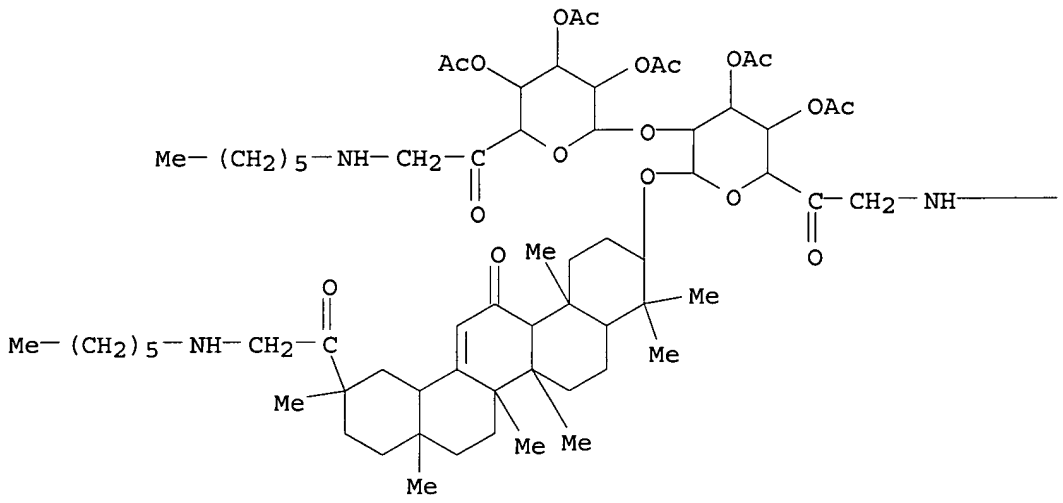
CN 30-Noroleanane, .alpha.-D-gluco-heptopyranosid-6-ulose deriv.

MF C73 H117 N3 O18

SR CA

LC STN Files: CA, CAPLUS

PAGE 1-A



PAGE 1-B

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PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L3 ANSWER 8 OF 41 REGISTRY COPYRIGHT 2002 ACS

RN 156126-31-7 REGISTRY

CN .alpha.-D-gluco-Heptopyranosid-6-ulose, (3.beta.,20.beta.)-11-oxo-20-[(phenylamino)acetyl]-30-norolean-12-en-3-yl 7-deoxy-7-(phenylamino)-2-O-[2,3,4-tri-O-acetyl-7-deoxy-7-(phenylamino)-.beta.-D-gluco-heptopyranos-6-ulos-1-yl]-, 3,4-diacetate (9CI) (CA INDEX NAME)

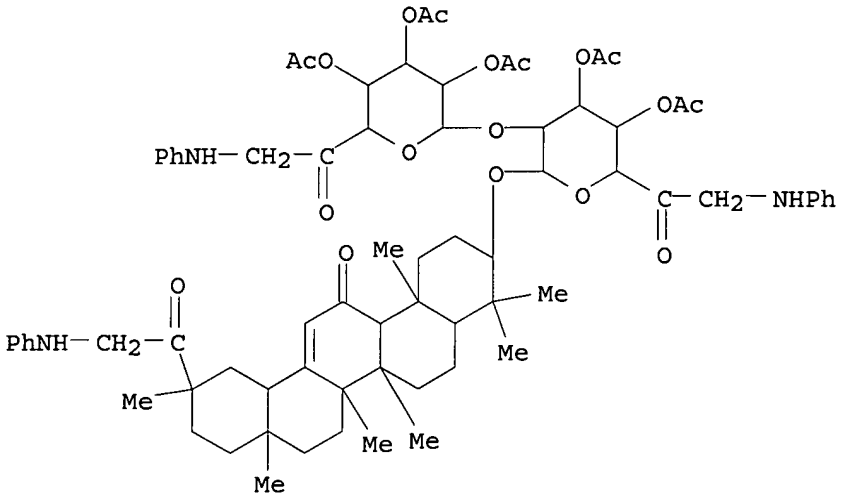
OTHER CA INDEX NAMES:

CN 30-Noroleanane, .alpha.-D-gluco-heptopyranosid-6-ulose deriv.

MF C73 H93 N3 O18

SR CA

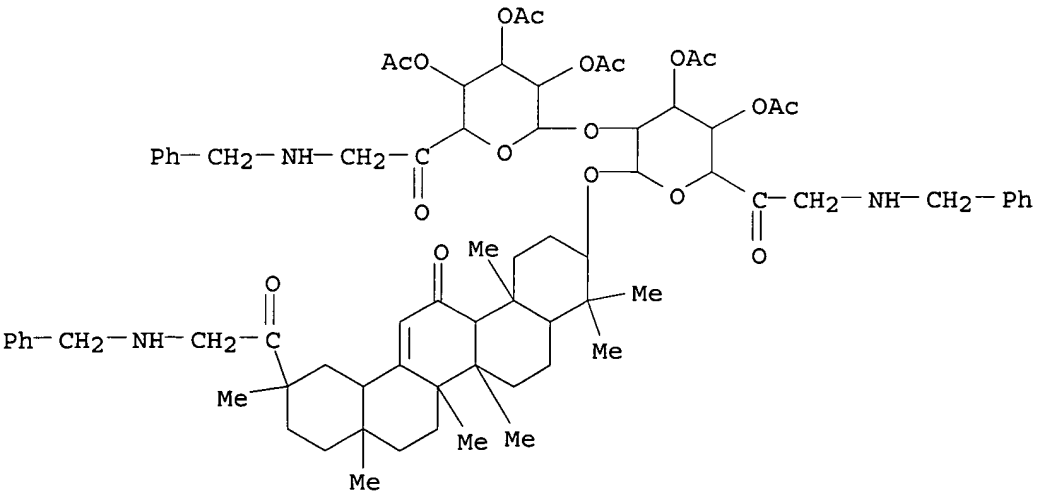
LC STN Files: CA, CAPLUS



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

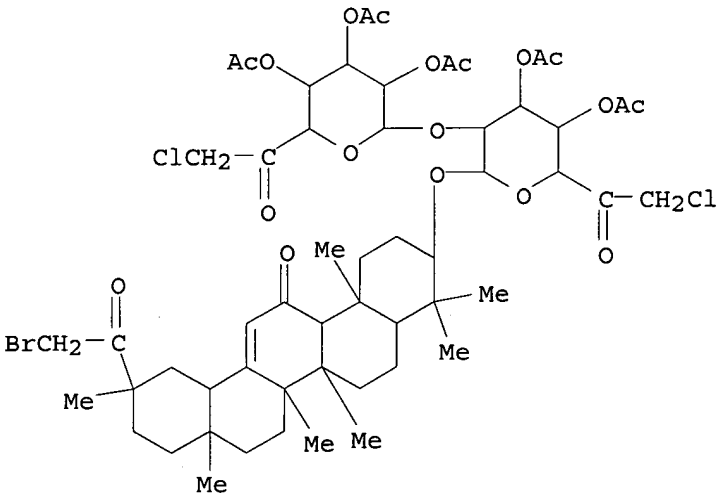
L3 ANSWER 9 OF 41 REGISTRY COPYRIGHT 2002 ACS
RN 156126-30-6 REGISTRY
CN .alpha.-D-gluco-Heptopyranosid-6-ulose, (3.beta.,20.beta.)-11-oxo-20-[[(phenylmethyl)amino]acetyl]-30-norolean-12-en-3-yl 7-deoxy-7-[(phenylmethyl)amino]-2-O-[2,3,4-tri-O-acetyl-7-deoxy-7-[(phenylmethyl)amino]-.beta.-D-gluco-heptopyranos-6-ulos-1-yl]-, 3,4-diacetate (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 30-Noroleanane, .alpha.-D-gluco-heptopyranosid-6-ulose deriv.
MF C76 H99 N3 O18
SR CA
LC STN Files: CA, CAPLUS



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

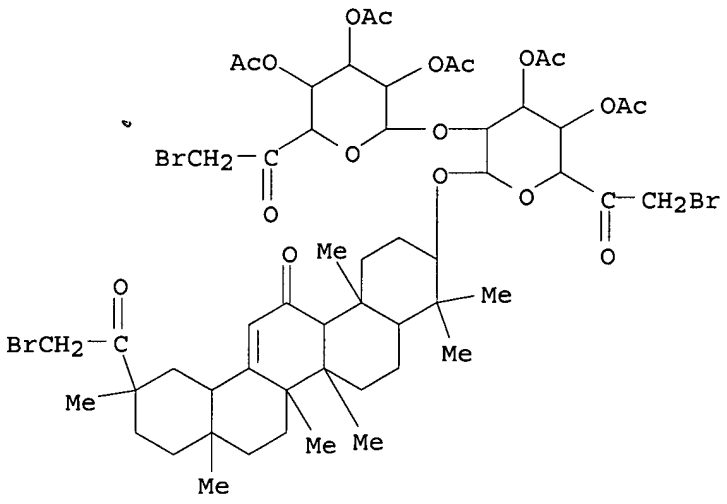
L3 ANSWER 10 OF 41 REGISTRY COPYRIGHT 2002 ACS
RN 156126-29-3 REGISTRY
CN .alpha.-D-gluco-Heptopyranosid-6-ulose, (3.beta.,20.beta.)-20-(bromoacetyl)-11-oxo-30-norolean-12-en-3-yl 7-chloro-7-deoxy-2-O-(2,3,4-tri-O-acetyl-7-chloro-7-deoxy-.beta.-D-gluco-heptopyranos-6-ulos-1-yl)-, diacetate (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 30-Noroleanane, .alpha.-D-gluco-heptopyranosid-6-ulose deriv.
MF C55 H75 Br Cl2 O18
SR CA
LC STN Files: CA, CAPLUS



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L3 ANSWER 11 OF 41 REGISTRY COPYRIGHT 2002 ACS
RN 156126-28-2 REGISTRY
CN .alpha.-D-gluco-Heptopyranosid-6-ulose, (3.beta.,20.beta.)-20-(bromoacetyl)-11-oxo-30-norolean-12-en-3-yl 7-bromo-7-deoxy-2-O-(2,3,4-tri-O-acetyl-7-bromo-7-deoxy-.beta.-D-gluco-heptopyranos-6-ulos-1-yl)-, diacetate (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 30-Noroleanane, .alpha.-D-gluco-heptopyranosid-6-ulose deriv.
MF C55 H75 Br3 O18
SR CA
LC STN Files: CA, CAPLUS

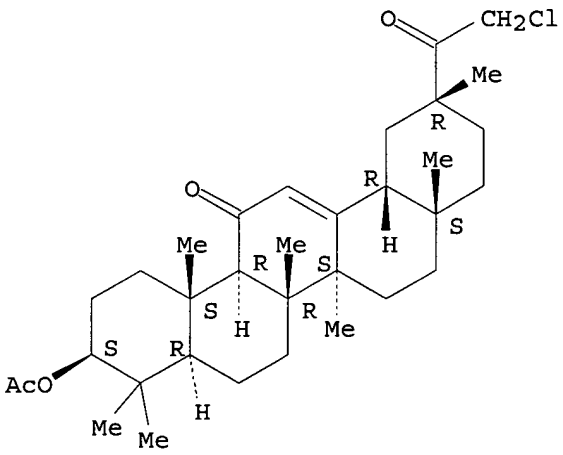


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L3 ANSWER 12 OF 41 REGISTRY COPYRIGHT 2002 ACS
RN 124440-80-8 REGISTRY
CN 13(2H)-Picenone, 2-chloroacetyl-1,3,4,4a,5,6,6a,6b,7,8,8a,9,10,11,12,12a,12b,14b-octadecahydro-10-hydroxy-2,4a,6a,6b,9,9,12a-heptamethyl-, acetate (6CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C33 H49 Cl O4
SR CAOLD
LC STN Files: BEILSTEIN*, CAOLD
(*File contains numerically searchable property data)

Absolute stereochemistry.



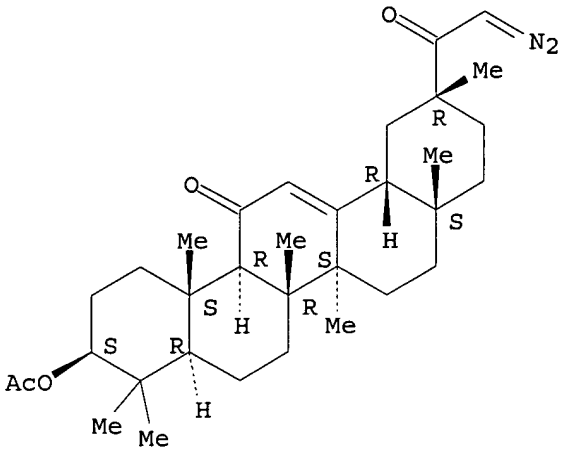
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L3 ANSWER 13 OF 41 REGISTRY COPYRIGHT 2002 ACS
RN 124440-79-5 REGISTRY

CN 13(2H)-Picenone, 2-diazoacetyl-1,3,4,4a,5,6,6a,6b,7,8,8a,9,10,11,12,12a,12b,14b-octadecahydro-10-hydroxy-2,4a,6a,6b,9,9,12a-heptamethyl-, acetate (6CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C33 H48 N2 O4
SR CAOLD
LC STN Files: CAOLD

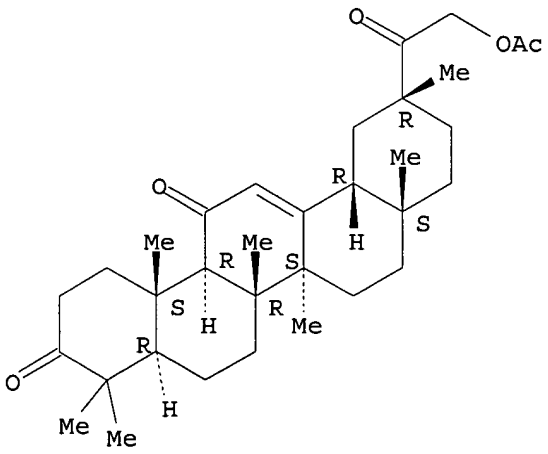
Absolute stereochemistry.



1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L3 ANSWER 14 OF 41 REGISTRY COPYRIGHT 2002 ACS
RN 124440-78-4 REGISTRY
CN 3,14-Picenedione, 1,2,4,4a,5,6,6a,6b,7,8,8a,9,10,11,12,12a,14a,14b-octadecahydro-11-hydroxyacetyl-4,4,6a,6b,8a,11,14b-heptamethyl-, acetate (6CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C33 H48 O5
SR CAOLD
LC STN Files: BEILSTEIN*, CAOLD
(*File contains numerically searchable property data)

Absolute stereochemistry.

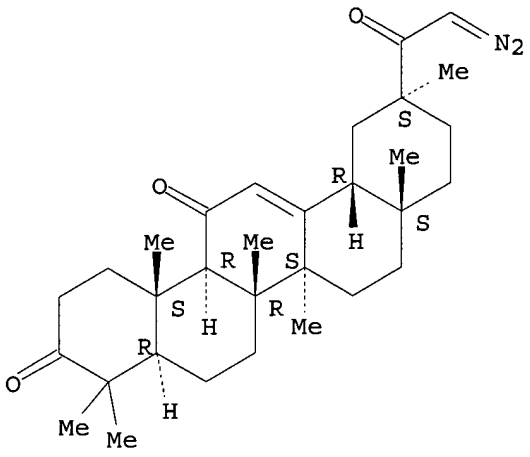


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L3 ANSWER 15 OF 41 REGISTRY COPYRIGHT 2002 ACS
RN 124139-42-0 REGISTRY
CN 3,14-Picenedione, 11-diazoacetyl-1,2,4,4a,5,6,6a,6b,7,8,8a,9,10,11,12,12a,14a,14b-octadecahydro-4,4,6a,6b,8a,11,14b-heptamethyl- (6CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C31 H44 N2 O3
SR CAOLD
LC STN Files: CAOLD

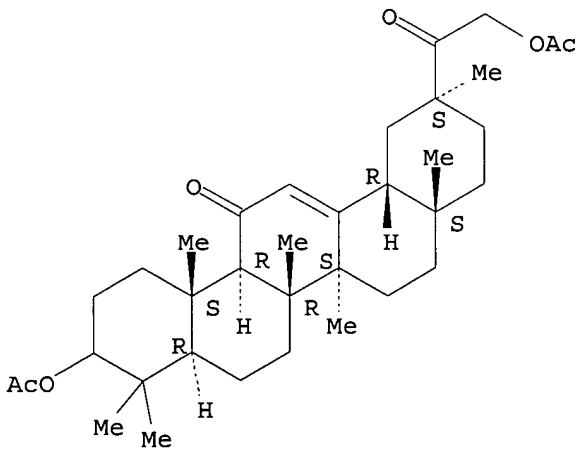
Absolute stereochemistry.



2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L3 ANSWER 16 OF 41 REGISTRY COPYRIGHT 2002 ACS
RN 119432-87-0 REGISTRY
CN 30-Norolean-12-en-11-one, 3-hydroxy-20-glycoloyl-, diacetate (6CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C35 H52 O6
SR CAOLD
LC STN Files: BEILSTEIN*, CAOLD
(*File contains numerically searchable property data)

Absolute stereochemistry.

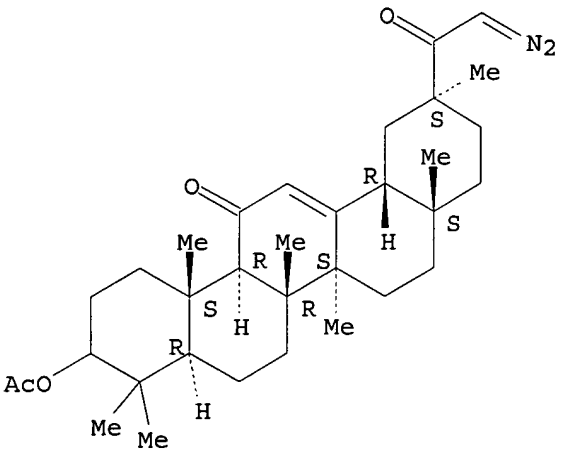


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L3 ANSWER 17 OF 41 REGISTRY COPYRIGHT 2002 ACS
RN 119324-46-8 REGISTRY
CN 30-Norolean-12-en-11-one, 20-diazoacetyl-3-hydroxy-, acetate (6CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C33 H48 N2 O4
SR CAOLD
LC STN Files: CAOLD

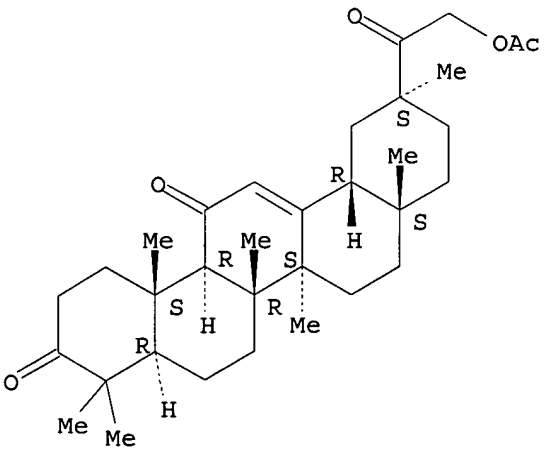
Absolute stereochemistry.

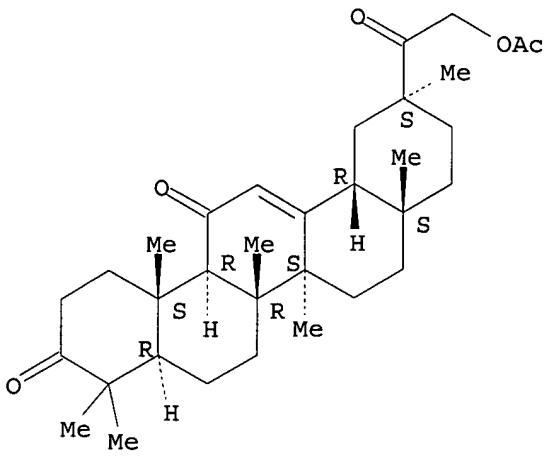


1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L3 ANSWER 18 OF 41 REGISTRY COPYRIGHT 2002 ACS
RN 119322-93-9 REGISTRY
CN 30-Norolean-12-ene-3,11-dione, 20-glycoloyl-, acetate (6CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C33 H48 O5
SR CAOLD
LC STN Files: BEILSTEIN*, CAOLD
(*File contains numerically searchable property data)

Absolute stereochemistry.



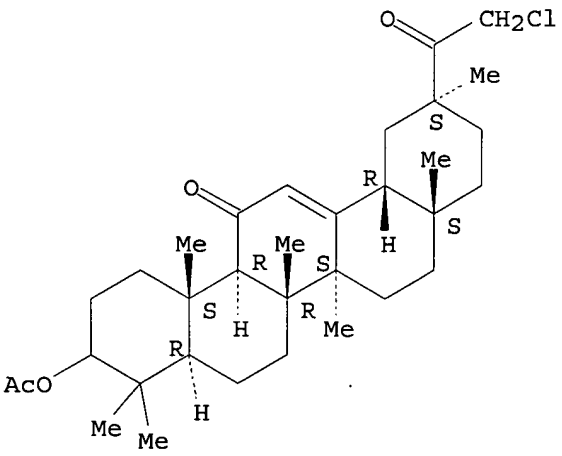


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L3 ANSWER 19 OF 41 REGISTRY COPYRIGHT 2002 ACS
RN 119248-84-9 REGISTRY
CN 30-Norolean-12-en-11-one, 20-chloroacetyl-3-hydroxy-, acetate (6CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C33 H49 Cl O4
SR CAOLD
LC STN Files: BEILSTEIN*, CAOLD
(*File contains numerically searchable property data)

Absolute stereochemistry.



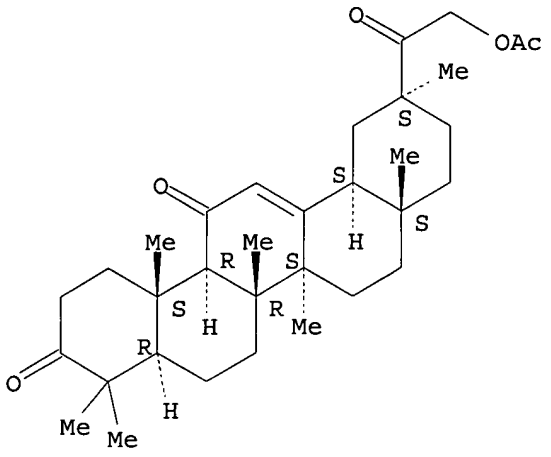
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L3 ANSWER 20 OF 41 REGISTRY COPYRIGHT 2002 ACS
RN 108798-01-2 REGISTRY
CN 30-Nor-18.alpha.-olean-12-ene-3,11-dione, 20-glycoloyl-, acetate (6CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C33 H48 O5

SR CAOLD
LC STN Files: BEILSTEIN*, CAOLD
(*File contains numerically searchable property data)

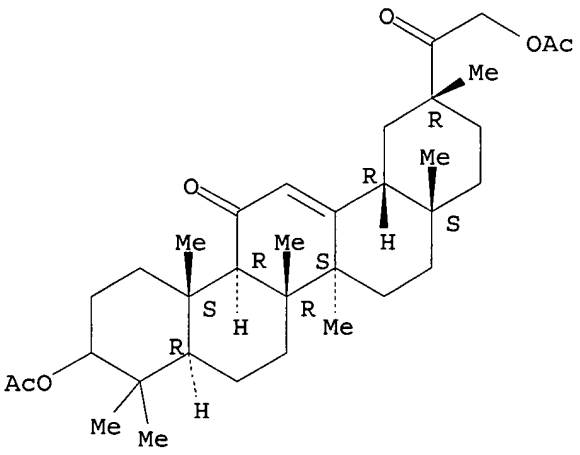
Absolute stereochemistry.



1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L3 ANSWER 21 OF 41 REGISTRY COPYRIGHT 2002 ACS
RN 105370-76-1 REGISTRY
CN 29-Norolean-12-en-11-one, 20-glycoloyl-3-hydroxy-, diacetate (7CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C35 H52 O6
SR CAOLD
LC STN Files: BEILSTEIN*, CAOLD
(*File contains numerically searchable property data)

Absolute stereochemistry.

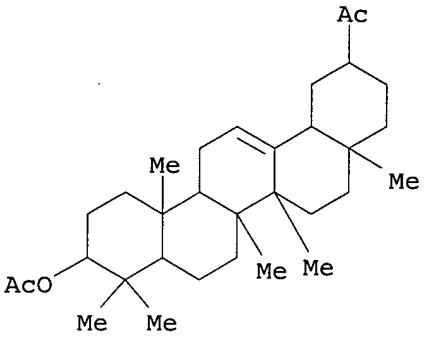


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L3 ANSWER 22 OF 41 REGISTRY COPYRIGHT 2002 ACS
RN 75858-11-6 REGISTRY
CN Ethanone, 1-[(3.beta.,20.beta.)-3-(acetyloxy)-29,30-dinorolean-12-en-20-

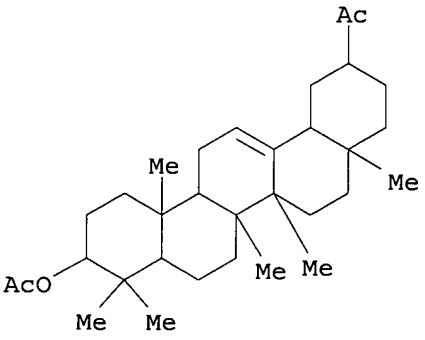
yl]- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 29,30-Dinoroleanane, ethanone deriv.
MF C32 H50 O3
LC STN Files: CA, CAPLUS



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L3 ANSWER 23 OF 41 REGISTRY COPYRIGHT 2002 ACS
RN 75858-10-5 REGISTRY
CN Ethanone, 1-[(3.beta.,20.alpha.)-3-(acetyloxy)-29,30-dinorolean-12-en-20-yl]- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 29,30-Dinoroleanane, ethanone deriv.
MF C32 H50 O3
LC STN Files: CA, CAPLUS



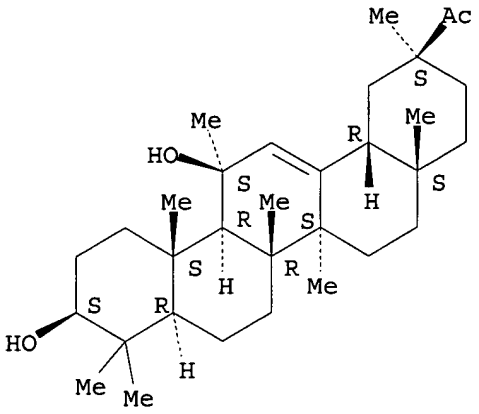
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L3 ANSWER 24 OF 41 REGISTRY COPYRIGHT 2002 ACS
RN 58307-74-7 REGISTRY
CN Ethanone, 1-[(3.beta.,11.beta.,20.beta.)-3,11-dihydroxy-11-methyl-30-norolean-12-en-20-yl]- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 30-Noroleanane, ethanone deriv.
FS STEREOSEARCH

MF C32 H52 O3
LC STN Files: CA, CAPLUS

Absolute stereochemistry.

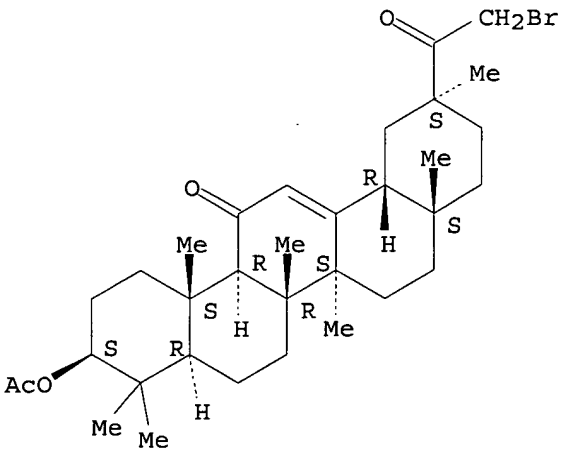


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L3 ANSWER 25 OF 41 REGISTRY COPYRIGHT 2002 ACS
RN 52491-47-1 REGISTRY
CN 30-Norolean-12-en-11-one, 3-(acetyloxy)-20-(bromoacetyl)-, (3.beta.,20.beta.)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C33 H49 Br O4
LC STN Files: CA, CAPLUS

Absolute stereochemistry.



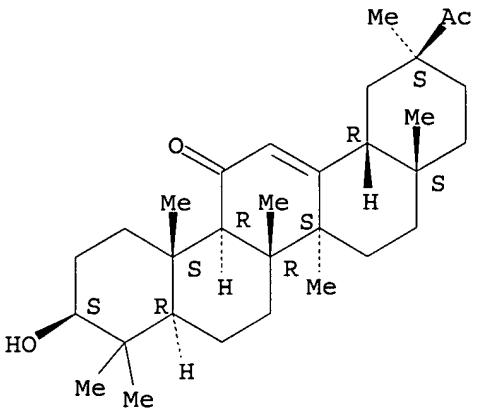
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L3 ANSWER 26 OF 41 REGISTRY COPYRIGHT 2002 ACS
RN 52027-62-0 REGISTRY

CN 30-Norolean-12-en-11-one, 20-acetyl-3-hydroxy-, (3.beta.,20.beta.)- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 3.beta.-Hydroxy-30-methyl-18.beta.-olean-12-ene-11,30-dione
FS STEREOSEARCH
MF C31 H48 O3
LC STN Files: BEILSTEIN*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB
(*File contains numerically searchable property data)

Absolute stereochemistry.

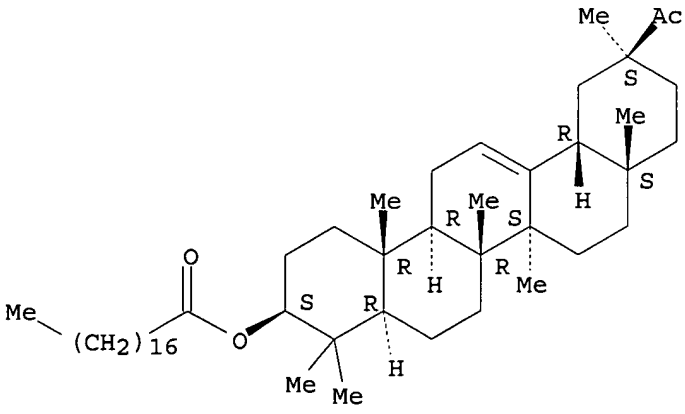


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

3 REFERENCES IN FILE CA (1967 TO DATE)
3 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L3 ANSWER 27 OF 41 REGISTRY COPYRIGHT 2002 ACS
RN 51985-01-4 REGISTRY
CN Octadecanoic acid, (3.beta.,20.beta.)-20-acetyl-30-norolean-12-en-3-yl ester (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 30-Noroleanane, octadecanoic acid deriv.
FS STEREOSEARCH
MF C49 H84 O3
LC STN Files: BEILSTEIN*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB
(*File contains numerically searchable property data)

Absolute stereochemistry.

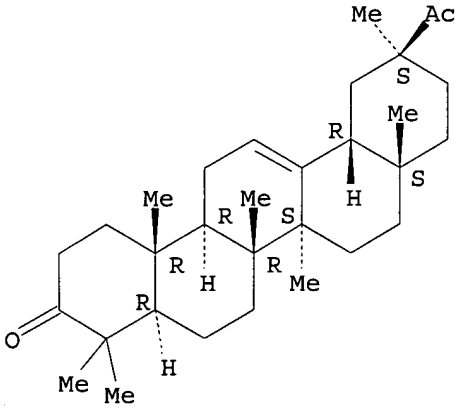


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1967 TO DATE)
2 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L3 ANSWER 28 OF 41 REGISTRY COPYRIGHT 2002 ACS
RN 51985-00-3 REGISTRY
CN 30-Norolean-12-en-3-one, 20-acetyl-, (20.beta.)- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 30-Methyl-18.beta.-olean-12-ene-3,30-dione
FS STEREOSEARCH
MF C31 H48 O2
LC STN Files: BEILSTEIN*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB
(*File contains numerically searchable property data)

Absolute stereochemistry.

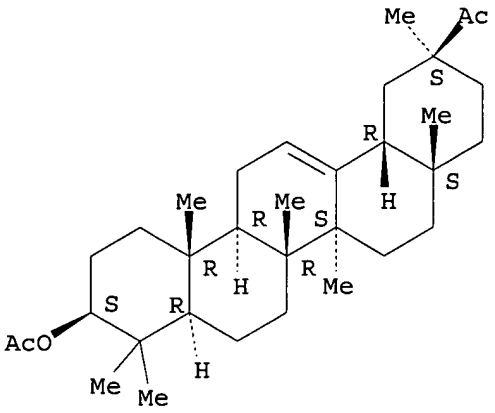


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1967 TO DATE)
2 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L3 ANSWER 29 OF 41 REGISTRY COPYRIGHT 2002 ACS
RN 51984-99-7 REGISTRY
CN Ethanone, 1-[(3.beta.,20.beta.)-3-(acetyloxy)-30-norolean-12-en-20-yl]-
(9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 30-Noroleanane, ethanone deriv.
OTHER NAMES:
CN 3.beta.-Acetoxy-30-methyl-18.beta.-olean-12-en-30-one
FS STEREOSEARCH
MF C33 H52 O3
LC STN Files: BEILSTEIN*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB
(*File contains numerically searchable property data)

Absolute stereochemistry.

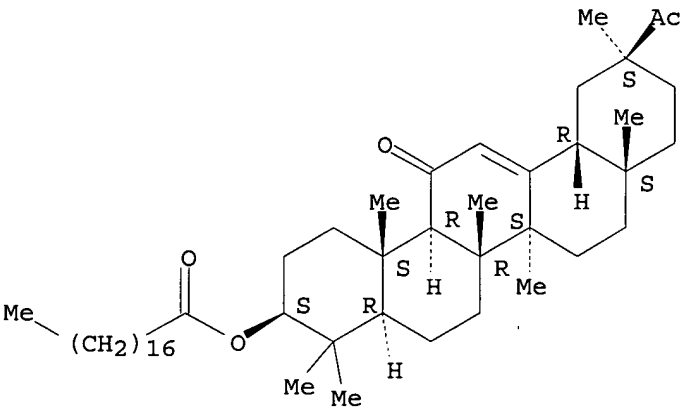


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1967 TO DATE)
2 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L3 ANSWER 30 OF 41 REGISTRY COPYRIGHT 2002 ACS
RN 51984-98-6 REGISTRY
CN 30-Norolean-12-en-11-one, 20-acetyl-3-[(1-oxooctadecyl)oxy]-, (3.beta.,20.beta.)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C49 H82 O4
LC STN Files: CA, CAPLUS

Absolute stereochemistry.



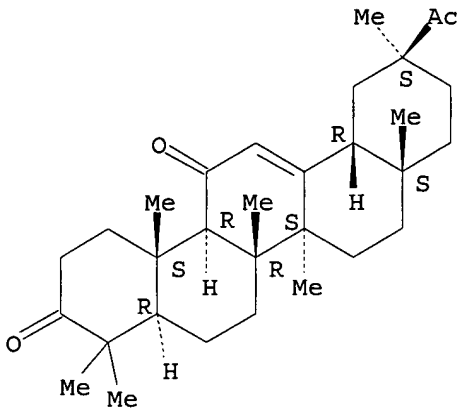
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L3 ANSWER 31 OF 41 REGISTRY COPYRIGHT 2002 ACS
RN 51984-97-5 REGISTRY
CN 30-Norolean-12-ene-3,11-dione, 20-acetyl-, (20.beta.)- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 30-Methyl-18.beta.-olean-12-ene-3,11,30-trione
FS STEREOSEARCH
MF C31 H46 O3

LC STN Files: BEILSTEIN*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB
(*File contains numerically searchable property data)

Absolute stereochemistry.

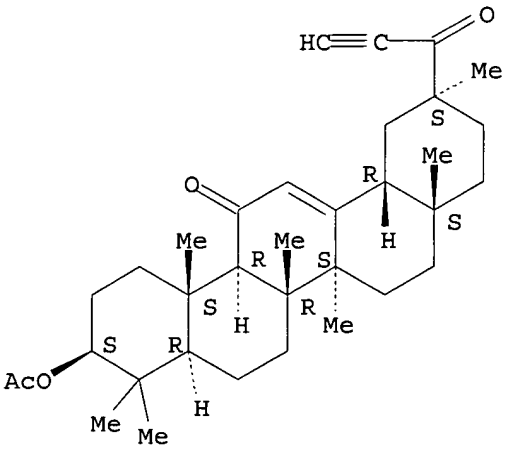


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1967 TO DATE)
2 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L3 ANSWER 32 OF 41 REGISTRY COPYRIGHT 2002 ACS
RN 50627-89-9 REGISTRY
CN 30-Norolean-12-en-11-one, 3-(acetyloxy)-20-(1-oxo-2-propynyl)-, (3.beta.,20.beta.)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C34 H48 O4
LC STN Files: BEILSTEIN*, CA, CAPLUS
(*File contains numerically searchable property data)

Absolute stereochemistry.



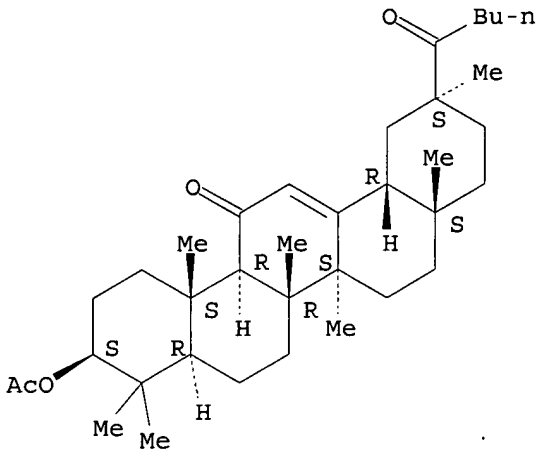
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L3 ANSWER 33 OF 41 REGISTRY COPYRIGHT 2002 ACS

RN 39705-08-3 REGISTRY
CN 30-Norolean-12-en-11-one, 3-(acetyloxy)-20-(1-oxopentyl)-, (3.beta.,20.beta.)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C36 H56 O4
LC STN Files: CA, CAPLUS

Absolute stereochemistry.

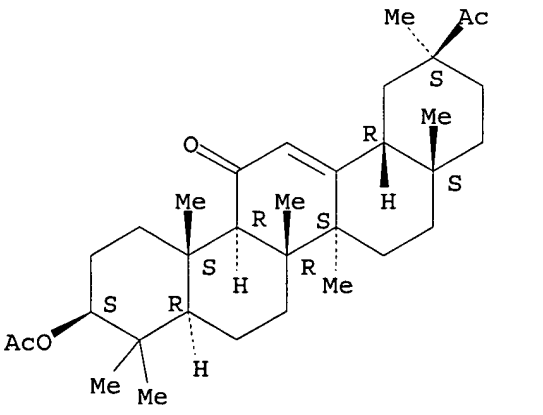


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L3 ANSWER 34 OF 41 REGISTRY COPYRIGHT 2002 ACS
RN 39705-07-2 REGISTRY
CN 30-Norolean-12-en-11-one, 20-acetyl-3-(acetyloxy)-, (3.beta.,20.beta.)-(9CI) (CA INDEX NAME)
OTHER NAMES:
CN 3.beta.-Acetoxy-30-methyl-18.beta.-olean-12-ene-11,30-dione
FS STEREOSEARCH
MF C33 H50 O4
LC STN Files: BEILSTEIN*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB
(*File contains numerically searchable property data)

Absolute stereochemistry.

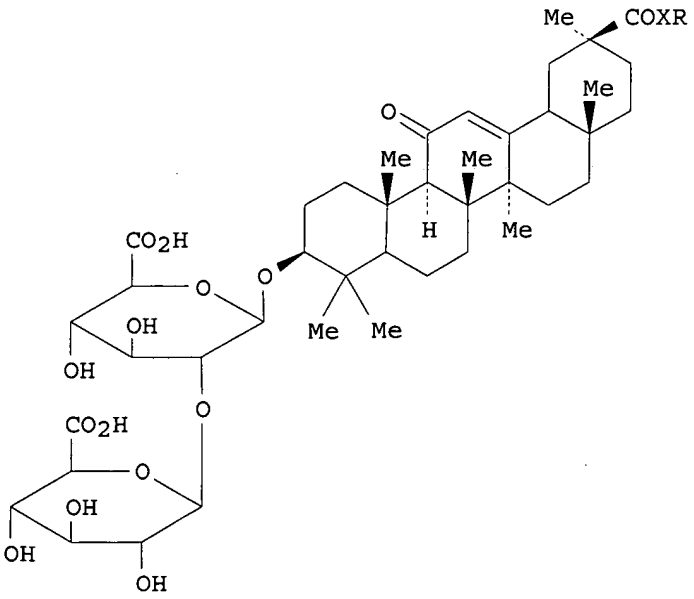


=> d l4 1- ibib abs
YOU HAVE REQUESTED DATA FROM 11 ANSWERS - CONTINUE? Y/(N):y

L4 ANSWER 1 OF 11 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1998:586266 CAPLUS
DOCUMENT NUMBER: 129:281040
TITLE: Lipid vesicle preparations containing 30-substituted glycyrrhizin derivatives for gene therapy
INVENTOR(S): Kiwada, Hiroshi
PATENT ASSIGNEE(S): Taiho Pharamceutical Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10236985	A2	19980908	JP 1997-42167	19970226

OTHER SOURCE(S): MARPAT 129:281040
GI

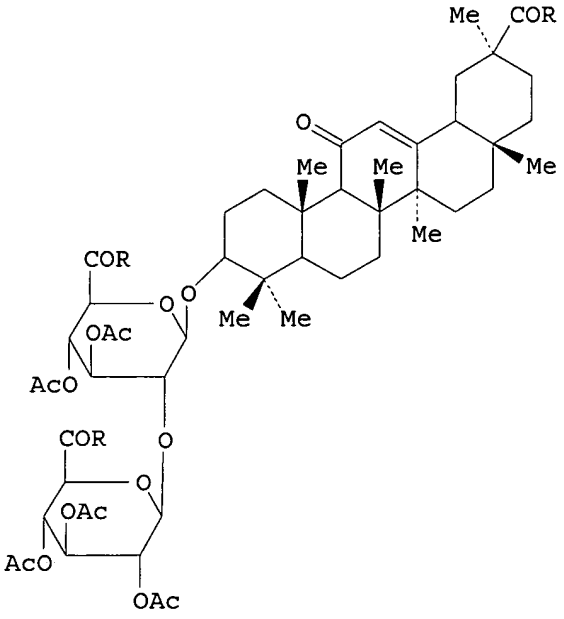


I

AB The prepns. have the derivs. I (R = C12-18 alkyl; X = O, NH) as a membrane component, and contain genes which are expressed in liver. The prepns. are systemically administered to selectively accumulated in liver. Small unilamellar vesicles (SUV) comprising hydrogenated yolk phosphatidylcholine, cholesterol, and 30-stearylglycyrrhizin were mixed with firefly luciferase gene (pLuc), and the mixt. was freeze-dried, thawed, and then ultrasonicated to give SUV contg. pLuc. The SUV, administered i.v. to rats, was selectively accumulated in the liver after 4 h. The SUV was resistant to digestion with nuclease.

L4 ANSWER 2 OF 11 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1994:457797 CAPLUS
DOCUMENT NUMBER: 121:57797

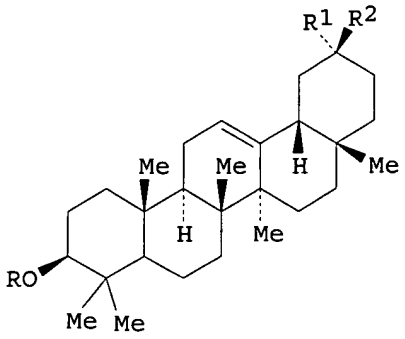
TITLE: Transformations of glycyrrhizic acid. V. Synthesis of homo derivatives of penta-O-acetylglycyrrhizic acid
AUTHOR(S): Baltina, L. A.; Serdyuk, N. T.; Tolstikov, G. A.
CORPORATE SOURCE: Inst. Org. Khim., Ufa, Russia
SOURCE: Zhurnal Obshchei Khimii (1993), 63(9), 2131-9
CODEN: ZOKHA4; ISSN: 0044-460X
DOCUMENT TYPE: Journal
LANGUAGE: Russian
GI



I

AB Penta-O-acetylglycyrrhizic acid, e.g. I (R = OH) was transformed by introduction of a diazo ketone group at the glycoside carboxyl functional group to give starting compds . for synthesis of homo derivs. contg. chloro, bromo, oxo, acetoxyketol, ketamine, and (2-acetylamino)thiazolyl substituents.

L4 ANSWER 3 OF 11 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1981:4135 CAPLUS
DOCUMENT NUMBER: 94:4135
TITLE: Biosynthesis of .beta.-amyrin. Part 1. The chemical synthesis of 20.alpha.- and 20.beta.-homo-.beta.-amyrins
AUTHOR(S): Cattel, Luigi; Delprino, Laura; Biglino, Giuseppe
CORPORATE SOURCE: Ist. Chim. Farm. Appl., Turin, I-10125, Italy
SOURCE: J. Chem. Res., Synop. (1980), (2), 58-9
CODEN: JRPSDC; ISSN: 0308-2342
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



I

AB The prepn. of the title compds. I (R = H; R1 = CHMe2, R2 = H; R1 = H, R2 = CHMe2, resp.) from the exocyclic olefin I (R = Ac, R1R2 = CH2) is reported. The olefin I (R = Ac, R1R2 = CH2), prepd. by degrdn. of glycyrrhetic acid, was hydroborated to a mixt. of alcs. I (R = Ac; R1 = H, R2 = CH2OH; R1 = CH2OH, R2 = H). These alcs. were converted to the title compds. by stepwise oxidn., homologation, CH2:CHI Grignard reaction, hydrogenation, and sapon. I (R = H, R1 = CHMe2, R2 = H) was stereospecifically formed by catalytic hydrogenation of the olefin I (R = Ac, R1R2 = CMe2), followed by sapon. The title compds. were characterized by 1H- and 13C-NMR spectra.

L4 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1976:74457 CAPLUS
DOCUMENT NUMBER: 84:74457
TITLE: Formation of a tetraene from 18.beta.-glycyrrhetic acid
AUTHOR(S): Brieskorn, C. H.; Beer, V.
CORPORATE SOURCE: Inst. Pharm. Lebensmittelchem., Univ. Wuerzburg, Wuerzburg, Ger.
SOURCE: Arch. Pharm. (Weinheim, Ger.) (1975), 308(11), 852-8
CODEN: ARPMAS
DOCUMENT TYPE: Journal
LANGUAGE: German
GI For diagram(s), see printed CA Issue.
AB Noroleanatriene I was prepd. from 18.beta.-glycyrrhetic acid via O-acetylation, acid azide formation, rearrangement and redn. to 3.beta.-acetoxy-11-oxo-30-norolean-12-en-20-amine, diazotization, and alkylation at C-11 with MeLi. I was treated with Cl2CHCO2H to give the tetraene II.

L4 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1974:491762 CAPLUS
DOCUMENT NUMBER: 81:91762
TITLE: 3-Oxygenated-30-methylolean-12-en-30-ones and 11-oxo derivatives thereof
INVENTOR(S): Baran, John S.; Liang, Chi-Dean
PATENT ASSIGNEE(S): Searle, G. D., and Co.
SOURCE: U.S., 4 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3810927	A	19740514	US 1972-225275	19720210

GI For diagram(s), see printed CA Issue.
AB 3-Oxygenated 30-methylolean-12-en-30-one derivs. (I, R = Me,Z =

.beta.-AcO, .alpha.-H; .beta.-HO, .alpha.-H; O; Z1 = O, H2) were prepd. E.g. I (R = Cl, Z = .beta.-AcO, .alpha.-H; Z1 = O), obtained by treating the free acid with SOCl2, was treated with MeMgI to give I (R = Me, Z = .beta.-AcO, .alpha.-H; Z1 = O) (II). I (R = Me, Z = .beta.-AcO, A-H; Z1 = H2) (III) was prepd. analogously. Hydrolysis of II and III gave I (R = Me, Z = .beta.-HO, .alpha.-H, Z1 = O; R = Me, Z = .beta.-HO, .alpha.-H, Z1 = H2, resp.), which were oxidized by H2CrO4 to I (R = Me, Z = Z1 = O; R = Me, Z = O, Z1 = H2 resp.).

L4 ANSWER 6 OF 11 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1974:433140 CAPLUS
DOCUMENT NUMBER: 81:33140
TITLE: Synthesis and biological activities of substituted glycyrrhetic acids
AUTHOR(S): Baran, John S.; Langford, Donna D.; Liang, Chi D.; Pitzele, Barnett S.
CORPORATE SOURCE: Dep. Chem., Searle Lab., Chicago, Ill., USA
SOURCE: J. Med. Chem. (1974), 17(2), 184-91
CODEN: JMCMAR
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Of the 46 derivs. of glycyrrhetic acid [471-53-4] substituted in the A, B,C, and E rings which were prepd., several showed antimineralocorticoid activity, as well as weak antiinflammatory, antiulcer, and antiviral activities. 3-Oxo-18.beta.-olean-12-en-30-oic acid (I) [39704-66-0], prepd. by H2CrO4 oxidn. of the corresponding 3-hydroxy deriv., had 75% of the anticorticoid activity of spironolactone [52-01-7] administered s.c. The relation of structure to biol. activity is discussed.

L4 ANSWER 7 OF 11 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1974:413666 CAPLUS
DOCUMENT NUMBER: 81:13666
TITLE: Glycyrrhetinic acid derivatives
INVENTOR(S): Kondo, Yasuji; Ueda, Kazuo
PATENT ASSIGNEE(S): Maruzen Pharmaceutical Co., Ltd.
SOURCE: Japan. Kokai, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 48081848	A2	19731101	JP 1972-14023	19720210

GI For diagram(s), see printed CA Issue.
AB Glycyrrhetinic acid derivs. I, R1 = H, R2 = OH, acyl, or R1R2 = O), were prepd. by reaction of II with CH2N2 to give IIa, by treating IIa with HX (X = halo) to give III, by reducing III and thru optionally deacylating the product. I are antiallergic and antiinflammatory agents. Thus, CH2N2 in Et2O was treated with 5 g II (R = Cl, R1 = H, R2 = OAc) (IIb) in dioxane, the mixt. kept overnight at room temp., concd., and HBr added gave III (X = Br, R1, R2 = same as IIb), which was refluxed with Zn in AcOH 2 hr to give 3 g I (R1 = H, R2 = OAc) (IV). Similarly prepd. was I (R1R2 = O). IV (1 g) was refluxed in alc. NaOH and acidified to give 0.7 g I (R1 = H, R2 = OH). V (R1R2 = O) (5 g) was refluxed wit SOCl2 in C6H6 to give 4.9 g II (R1R2 = O, R = Cl). Similarly V (R1 = H, R2 = OAc) gave IIb.

L4 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1973:546695 CAPLUS
DOCUMENT NUMBER: 79:146695
TITLE: Synthesis and reactions of 18.beta.-glycyrrhetaldehyde
AUTHOR(S): Rozen, S.; Shahak, I.; Bergmann, E. D.

CORPORATE SOURCE: Dep. Org. Chem., Hebrew Univ., Jerusalem, Israel
SOURCE: Tetrahedron (1973), 29(15), 2327-31
CODEN: TETRAB
DOCUMENT TYPE: Journal
LANGUAGE: English
GI For diagram(s), see printed CA Issue.
AB 18.beta.-Glycyrrhetaldehyde deriv. (I, R = CHO) was prepd. by redn. of the thioester (I, R = COSCH2C6H4Cl-p) with partly deactivated Raney Ni and by the McFayden reaction. The reactions of the aldehyde with phosphonates, Ph3P:CH2, and HC:CMgBr were described. Derivs. with C-20 side-chains resembling those in corticoid hormones were prepd.

L4 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1973:72390 CAPLUS
DOCUMENT NUMBER: 78:72390
TITLE: Ketones derived from glycyrrhetic acid
AUTHOR(S): Rozen, S.; Shahak, I.; Bergmann, E. D.
CORPORATE SOURCE: Dep. Org. Chem., Hebrew Univ., Jerusalem, Israel
SOURCE: Synthesis (1972), (12), 701-2
CODEN: SYNTBF
DOCUMENT TYPE: Journal
LANGUAGE: English
GI For diagram(s), see printed CA Issue.
AB The acid chloride (I, X = Cl) (II) reacted with RCu (R = Me, Bu, Ph) in THF to give the corresponding ketones. II also reacted with 2-pyridylmethyllithium and CuI in THF to give the enol form of I (X = 2-pyridylmethyl).

L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1972:41972 CAPLUS
DOCUMENT NUMBER: 76:41972
TITLE: Antiinflammatory action of oleanolic acid derivatives
AUTHOR(S): Kim, Hyun Woo
CORPORATE SOURCE: Coll. Med., Seoul Natl. Univ., Seoul, S. Korea
SOURCE: Soul Uidae Chapchi (1971), 12(2), 109-15
CODEN: SUICAC
DOCUMENT TYPE: Journal
LANGUAGE: Korean
AB 3.beta.-Acetoxy-30-acetoxymethylolean-12-ene-11,30-dione (I) [**10301-79-8**] exhibited greater antiinflammatory activity than hydrocortisone [50-23-7] in mice. 3.beta.-Acetoxy-28-hydroxymethylolean-12-ene-28-one [33776-67-9], oleanolic acid acetate [4339-72-4], and glycyrrhizine [1405-86-3] were inactive. Serum glutamic oxalacetic transaminase and glutamic pyruvic transaminase activities assocd. with formalin [50-00-0]-induced inflammation were decreased by antiinflammatory drugs, including I, while ATPase activity in the brain and liver tissues was increased.

L4 ANSWER 11 OF 11 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1968:105393 CAPLUS
DOCUMENT NUMBER: 68:105393
TITLE: Nuclear magnetic resonance spectra of 18.alpha.- and 18.beta.-glycyrrhetic acid derivatives
AUTHOR(S): Mousseron-Canet, Magdeleine; Crouzet, Florette; Chabaud, Jean P.
CORPORATE SOURCE: Ecole Natl. Super Chim., Montpellier, Fr.
SOURCE: Bull. Soc. Chim. Fr. (1967), (12), 4668-73
CODEN: BSCFAS
DOCUMENT TYPE: Journal
LANGUAGE: French
GI For diagram(s), see printed CA Issue.
AB The N.M.R. spectra of I and II were examd. in CDCl3 using Me4Si as internal standard. Thus, 1 g. 18.beta.-glycyrrhetic acid (III) in 100 ml. MeOH was treated with CH2N2 until they ellow color persisted, the mixt.

stirred 1 hr., solvents removed, and the ester was purified by chromatog. on a silica column and a 3:2 C6H6-Et2O eluent to give I (X = OH, Y = CO2Me) (Ia), m. 252.degree.. I (X = OAc, Y = CO2Me), m. 310.degree., was prepd. by treating Me 18.beta.-glycyrrhetate (IV) with Ac2O in pyridine. IV (8 g.) in 100 ml. anhyd. pyridine was stirred with 16 g. p-MeC6H4SO2Cl in 40 ml. pyridine 24 hrs. at 0.degree., and the mixt. poured into iced water to give 9 g. of the tosylate deriv., m. 157.degree.. The tosylate (9 g.) was passed through an activated Al2O3 column using C6H6 as eluant and the resulting isomeric ethylenic mixt. was further sepd. by silica column contg. 10% AgNO3 and C6H6-Et2O (9:1) eluant to give 5 g. V, m. 210-14.degree., and VI. V in 80 ml. anhyd. Et2O was treated 15 days at 20.degree. with 15% excess monoperphthalic acid in anhyd. Et2O to give 500 mg. 2.alpha.,3.alpha.-epoxide of V, m. 276-8.degree., [.alpha.]25D 340.degree.. The 3-oxo analog of Ia, m. 248.degree., was prepd. by treating IV in pyridine with a cold mixt. of Cr2O3 in pyridine. I (X = OAc, Y = COCHN2) (VII), m. 206.degree., was prepd. by treating III with Ac2O in pyridine, then by treating the resulting acetate with SOCl2 in pyridine and anhyd. Et2O, followed by treating the acid chloride with CH2N2. VII (1.6 g.) was refluxed 45 min. with 100 ml. AcOH and the solvents removed in vacuo to give a residue which was chromatographed on silica with 85:15 C6H6-Et2O to give I (X = OAc, Y = COCH2-OAc), m. 275-7.degree.. Ir, N.M.R., and uv spectral data for the compds. prepd. were given. The following II were prepd. similarly (X, Y, and m.p. given): OH, CO2Me, 267-8.degree.; OAc, CO2H, 321-3.degree.; OAc, COCHN2, 238-40.degree.; and OAc, COCH2-OAc, 258-60.degree.. Also prepd. were VIIa, VIII, m. 210-12.degree.; 2.alpha.,3.alpha.-epoxide of VIII, m. 232-8.degree.; and IX, m. 228-30.degree.. The Me and proton signals for the 16 compds. prepd. are given.

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YOU HAVE REQUESTED DATA FROM 28 ANSWERS - CONTINUE? Y/(N):y

L3 ANSWER 1 OF 28 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:863496 CAPLUS
DOCUMENT NUMBER: 135:366719
TITLE: Composition for and method of treatment of Kaposi's sarcoma and Kaposi's sarcoma-assocd. herpesvirus infection using **triterpenoids**
INVENTOR(S): Flore, Ornella
PATENT ASSIGNEE(S): USA
SOURCE: U.S., 16 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6323183	B1	20011127	US 1999-324473	19990602
US 2002091158	A1	20020711	US 2001-976838	20011015

PRIORITY APPLN. INFO.: US 1999-324473 A3 19990602
AB Methods and compns. for treating Kaposi's sarcoma and **Epstein Barr** virus using a a therapeutic deriv. of a triterpenoid acid and derivs. thereof are disclosed. The present invention relates to the use of a triterpenoid preferably a glycyrrhizic acid (glycyrrhizin) to inhibit the transcription of viral latent genes and the consequential viral latent cycle at doses that do not affect the uninfected cells. Using glycyrrhizic acid and derivs., the Kaposi's sarcoma-assocd. herpesvirus (KSHV) infected cells are completely killed six days after treatment.
REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 2 OF 28 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:709029 CAPLUS
DOCUMENT NUMBER: 136:95571
TITLE: Anti-tumor promoting effects of multiflorane-type **triterpenoids** and cytotoxic activity of karounidiol against human cancer cell lines
AUTHOR(S): Akihisa, T.; Tokuda, H.; Ichiishi, E.; Mukainaka, T.; Toriumi, M.; Ukiya, M.; Yasukawa, K.; Nishino, H.
CORPORATE SOURCE: Nihon University, College of Science and Technology, Tokyo, Chiyoda-ku, 101-8308, Japan
SOURCE: Cancer Letters (Shannon, Ireland) (2001), 173(1), 9-14
CODEN: CALEDQ; ISSN: 0304-3835
PUBLISHER: Elsevier Science Ireland Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Forty-nine multiflorane-type **triterpenoids** consisting of 11 compds. isolated from the seeds of Trichosanthes kirilowii (Cucurbitaceae) and 38 of their derivs. have been evaluated for their inhibitory effects on **Epstein-Barr** virus early antigen (EBV-EA) activation induced by the tumor promoter 12-O-tetradecanoylphorbol-13-acetate in Raji cells as a primary screening test for antitumor promoters. All of the compds. tested showed an inhibitory effect against EBV-EA activation, and among which 43 were revealed to possess remarkable activity with potencies either comparable to or stronger than that of glycyrrhetic acid, a known natural antitumor promoter. Their structure-activity relation is discussed. Evaluation of the cytotoxic activity of karounidiol against human cancer cell lines exhibited cytotoxicity esp. against a human renal cancer.
REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

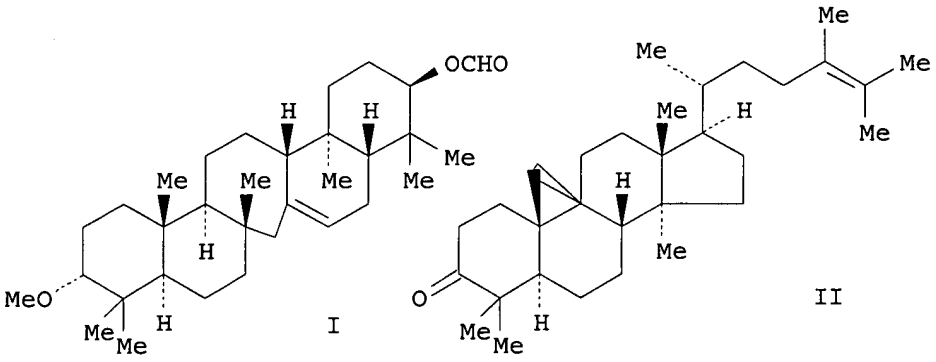
L3 ANSWER 3 OF 28 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:686777 CAPLUS
DOCUMENT NUMBER: 136:79360
TITLE: Cancer chemopreventive agents, serratane-type **triterpenoids** from Picea jezoensis
AUTHOR(S): Tanaka, R.; Minami, T.; Tsujimoto, K.; Matsunaga, S.; Tokuda, H.; Nishino, H.; Terada, Y.; Yoshitake, A.
CORPORATE SOURCE: Department of Medicinal Chemistry, Osaka University of Pharmaceutical Sciences, Takatsuki, Osaka, 569-1094, Japan
SOURCE: Cancer Letters (Shannon, Ireland) (2001), 172(2), 119-126
CODEN: CALEDQ; ISSN: 0304-3835
PUBLISHER: Elsevier Science Ireland Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Seven serratane-type **triterpenoids** isolated from the cuticle of Picea jezoensis (Sieb. et Zucc.) Carr. jezoensis (Pinaceae) and the stem bark of Picea jezoensis (Sieb. et Zucc.) Carr. hondoensis (Mayer) Rehder (Pinaceae) were studied their possible inhibitory effects on **Epstein-Barr** virus early antigen (EBV-EA) activation induced by 12-O-tetradecanoylphorbol-13-acetate (TPA). All compds. showed strong inhibitory effects on the EBV-EA activation, being stronger than that of oleanolic acid, which exerts on cancer preventive activity in animal carcinogenesis models. Among these compds., 13.alpha., 14.alpha.-epoxy-3.beta.-methoxyserratan-21.beta.-ol and 3.beta.-methoxy-21.alpha.-hydroxyserrat-14-en-29-al were investigated for the inhibitory effects in a two-stage mouse skin carcinogenesis test on mouse skin using 7,12-dimethylbenz[a]anthracene as initiator and TPA as promoter. 13.alpha.,14.alpha.-Epoxy-3.beta.-methoxyserratan-21.beta.-ol was found to exhibit the excellent antitumor promoting activity in the in vivo carcinogenesis test.
REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 4 OF 28 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:103906 CAPLUS
DOCUMENT NUMBER: 135:282426
TITLE: Anti-tumor-promoting activities (cancer chemopreventive activities) of natural products
AUTHOR(S): Konoshima, Takao; Takasaki, Midori
CORPORATE SOURCE: Kyoto Pharmaceutical University, Kyoto, 607-8414, Japan
SOURCE: Studies in Natural Products Chemistry (2000), 24(Bioactive Natural Products (Part E)), 215-267
CODEN: SNPCE2
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review with 66 refs. To search for possible anti-tumor-promoters (cancer chemopreventive agents) from natural resource, more than one-hundred and fifty natural products (flavonoids, lignans, euglobals, **triterpenoids**, saponins and cardiac steroids etc.) were examd. by primary screening test using in vitro synergistic assay on **Epstein -Barr** virus early antigen (EBA-EA) activation. Several compds. which exhibited the inhibitory effect on EBV-EA activation were further assayed by in vivo two-stage carcinogenesis test (mouse skin, pulmonary and liver carcinogenesis). Of many arom. compds., afromosin, pendulone, amorphispironone, tephrosin, asarinin, xanthoxylol, euglobal-G1, and euglobal-III exhibited significant anti-tumor-promoting activities on mouse skin and pulmonary carcinogenesis. Further, many novel **triterpenoids** and their glycosides were isolated from Leguminous

and Cucurbitaceous plants, and gleditsiasaponin C, gymicladussaponin G, 23, 24-dihydrocucurbitacin F, and cayaponoside B also exhibited strong inhibitory effects on two-stage carcinogenesis test. Of cardiac glycosides, digitoxin exhibited the most remarkable effects on mouse skin and pulmonary carcinogenesis. Furthermore, the combined effects of plural constituents and plant exts. on cancer chemoprevention were also examd., and the combination of afromosin with soyasaponin I enhanced the each anti-tumor-promoting activity. Consequently, many active compds. were found out and these compds. might be valuable chemopreventive agents.

REFERENCE COUNT: 66 THERE ARE 66 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 5 OF 28 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:812001 CAPLUS
DOCUMENT NUMBER: 134:83490
TITLE: Bioactive **triterpenoids** from the stem bark of Picea glehni
AUTHOR(S): Tanaka, Reiko; Kinouchi, Yoshitaka; Tokuda, Harukuni; Nishino, Hoyoku; Matsunaga, Shunyo
CORPORATE SOURCE: Department of Medicinal Chemistry, Osaka University of Pharmaceutical Sciences, Osaka, Japan
SOURCE: Planta Medica (2000), 66(7), 630-634
CODEN: PLMEAA; ISSN: 0032-0943
PUBLISHER: Georg Thieme Verlag
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



AB Two new **triterpenoids**, 3.alpha.-methoxyserrat-14-en-21.beta.-yl formate (I), and 24-methylcycloartenone (II), were isolated from the stem bark of Picea glehni (Fr. Schm.) Masters together with three known **triterpenoids**, 3.alpha.-methoxyserrat-14-en-21.beta.-ol, 3.beta.-methoxyserrat-14-en-21.beta.-ol, and piceanonol A. I and II, and a synthetic sample, 3.alpha.-methoxyserrat-13-en-21.beta.-yl formate showed potent inhibitory effects on **Epstein-Barr** virus early antigen (EBV-EA) activation induced by the tumor promoter 12-O-tetradecanoylphorbol-13-acetate (TPA).

REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 6 OF 28 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:431044 CAPLUS
DOCUMENT NUMBER: 133:83607
TITLE: Antitumor-promoting activities of sterols and **triterpenoids**

AUTHOR(S): Yasmuawa, Ken; Akihisa, Toshihiro
CORPORATE SOURCE: Department of Pharmacy, College of Pharmacy, Nihon University, Narashinodai, Funabashi-shi, Chiba-ken, 274-8555, Japan
SOURCE: Nihon Yukagakkaishi (2000), 49(6), 571-582
CODEN: NIYUFC; ISSN: 1341-8327
PUBLISHER: Nihon Yukagaku Gakkai
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Japanese

AB A review with 88 refs. The eradication of cancer is one of the important research subjects for mankind toward the 21st century. In the course of our research on potent cancer chemopreventive agents from edible plants and fungi, and from crude herbal medicines, we have found that various sterols and triterpene alcs. and their oxygenated derivs. showed activity in in vivo primary screening assay of antitumor promoters by inhibiting the inflammatory ear edema induced by 12-O-tetradecanoylphorbol-13-acetate (TPA) in mice. In this review, we discussed the inhibitory activity of sterols and **triterpenoids** toward TPA-induced inflammatory ear edema, and tumor promotion during two-stage carcinogenesis with 7,12-dimethylbenz[a]anthracene (DMBA) and TPA. This activity was also noted in several other assays on antitumor promoters such as that on the activation of **Epstein-Barr** virus by TPA, and TPA-stimulated Pi incorporation in HeLa cells. Sterols and **triterpenoids** are minor but ubiquitous components in the human diet, and are considered to be non-toxic. These compds. may possibly prove useful for producing cancer chemopreventive agents.

L3 ANSWER 7 OF 28 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:799978 CAPLUS
DOCUMENT NUMBER: 132:134799
TITLE: Bioactive Steroids from the Whole Herb of Euphorbia chamaesyce
AUTHOR(S): Tanaka, Reiko; Kasubuchi, Kazuaki; Kita, Shunji; Tokuda, Harukuni; Nishino, Hoyoku; Matsunaga, Shunyo
CORPORATE SOURCE: Department of Medicinal Chemistry, Osaka University of Pharmaceutical Sciences, Takatsuki Osaka, 569-1094, Japan
SOURCE: Journal of Natural Products (2000), 63(1), 99-103
CODEN: JNPRDF; ISSN: 0163-3864
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Three new ergostane-type steroids, 3.beta.-hydroxy-4.alpha.,14.alpha.-dimethyl-5.alpha.-ergosta-8,24(28)-dien-11-one, 3.beta.,11.alpha.-dihydroxy-4.alpha.,14.alpha.-dimethyl-5.alpha.-ergosta-8,24(28)-dien-7-one, and 3.beta.,7.alpha.-dihydroxy-4.alpha.,14.alpha.-dimethyl-5.alpha.-ergosta-8,24(28)-dien-11-one, were isolated, together with two known **triterpenoids**, wrightial and lup-20(30)-ene-3.beta.,29-diol from the whole herb of Euphorbia chamaesyce. The third steroid Compd. showed a potent inhibitory effect on **Epstein-Barr** virus early antigen activation induced by the tumor promoter 12-O-tetradecanoylphorbol 13-acetate (TPA).

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 8 OF 28 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:399063 CAPLUS
DOCUMENT NUMBER: 131:153533
TITLE: Anti-carcinogenic activity of Taraxacum plant. II
AUTHOR(S): Takasaki, Midori; Konoshima, Takao; Tokuda, Harukuni; Masuda, Kazuo; Arai, Yoko; Shiojima, Kenji; Ageta, Hiroyuki
CORPORATE SOURCE: Kyoto Pharmaceutical University, Kyoto, 607-8414, Japan

SOURCE: Biological & Pharmaceutical Bulletin (1999), 22(6), 606-610
CODEN: BPBLEO; ISSN: 0918-6158
PUBLISHER: Pharmaceutical Society of Japan
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Eleven **triterpenoids** (I-XI) from the roots of Taraxacum japonicum (Compositae) were examd. for their inhibitory effects on **Epstein-Barr** virus early antigen (EBV-EA) induced by the tumor promoter, 12-O-tetradecanoylphorbol-13-acetate (TPA), in Raji cells as a primary screening test for anti-tumor-promoters (cancer chemopreventive agents). Of these **triterpenoids**, taraxasterol I and taraxerol VII exhibited significant inhibitory effects on EBV-EA induction, but the inhibitory effects of their acetates II and VIII were weaker than those of I and VII. Furthermore, I and VII exhibited potent anti-tumor-promoting activity in the two-stage carcinogenesis tests of mouse skin using 7,12-dimethylbenz[a]anthracene (DMBA) as an initiator and TPA as a promoter, and I showed a remarkable inhibitory effect on mouse spontaneous mammary tumors using C3H/OuJ mouse. These results strongly suggested that taraxasterol could be a valuable chemopreventive agent.

REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 9 OF 28 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1997:423692 CAPLUS
DOCUMENT NUMBER: 127:173813
TITLE: Triterpenoid inhibitors of interleukin-1 secretion and tumor-promotion from Tripterygium wilfordii var. regelii
AUTHOR(S): Takaishi, Yoshihisa; Wariishi, Noriko; Tateishi, Hideo; Kawazoe, Kazuyoshi; Nakano, Kimiko; Ono, Yukihisa; Tokuda, Haruyuki; Nishino, Hoyoku; Iwashima, Akio
CORPORATE SOURCE: Faculty of Pharmaceutical Sciences, University of Tokushima, Tokushima, 770, Japan
SOURCE: Phytochemistry (1997), 45(5), 969-974
CODEN: PYTCAS; ISSN: 0031-9422
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Three new **triterpenoids**, 2,3,22.beta.-trihydroxy-21-oxo-24,29-nor-D:A-friedooleana-1,3,5(10)-triene, 2.alpha.,6.beta.-dihydroxy-3-oxo-24-nor-D:A-friedooleana-4-ene-29-oic acid and 2,3,7-trihydroxy-6-oxo-24-nor-D:A-friedooleana-1,3,5(10),7-tetraene-29-oic acid, named rheol A, B and C, and nine known **triterpenoids** were isolated from T. wilfordii var. regelii. Their structures were established on the basis of the chem. reactions and spectroscopic evidence. Isolated compds. and derivs. were obsd. to inhibit **Epstein-Barr** virus early antigen activation and showed potent inhibitory activities against interleukin-1.alpha. and .beta. release from human peripheral mononuclear cells.

L3 ANSWER 10 OF 28 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1997:228375 CAPLUS
DOCUMENT NUMBER: 126:262894
TITLE: Influence of Quillaja saponaria triterpenoid content on the immunomodulatory capacity of **Epstein-Barr** virus iscoms
AUTHOR(S): Dotsika, E.; Karagouni, E.; Sundquist, B.; Morein, B.; Morgan, A.; Villacres-Eriksson, M.
CORPORATE SOURCE: Hellenic Pasteur Institute, Athens, 115 21, Greece
SOURCE: Scandinavian Journal of Immunology (1997), 45(3), 261-268
CODEN: SJIMAX; ISSN: 0300-9475

PUBLISHER: Blackwell
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The immune responses to immunostimulating complexes (iscoms) contg. recombinant **Epstein-Barr** virus (EBV) gp340 envelope protein was evaluated in BALB/c (H-2d) and CBA (H-2k) mice. Gp340-iscoms were used either with a low content of Quillaja triterpenoid adjuvant (L-iscoms) or supplemented with addnl. Quillaja adjuvant in the form of iscomatrix (S-iscoms). Class and subclass distribution of anti-gp340 antibodies, EBV-neutralizing antibodies, antigen-specific T cell proliferation and cytokine prodn. were detd. and these results compared to those obtained by immunization with non-adjuvated gp340. The H-2d and H-2k mice were characterized as low or high responders in respect to the level of specific anti-gp340 antibodies, secretion of IgG2a isotype, antigen-specific lymphoproliferative capacity, interferon-.gamma. (IFN-.gamma.) and interleukin-10 (IL-10) prodn. in the basic immunizations with gp340. While presentation of the antigen in iscom formulations with low levels of Quillaja **triterpenoids** induces a moderate enhancement of the immune responses in the low responder H-2d mice, supplementation with high levels of iscomatrix immunomodulator was required to enhance the immune responses in the high responder H-2k mice. In both mouse strains s.c. immunization with S-iscoms resulted in a significant increase of IgG1- and IgG2a-specific antibodies, as well as in strong antigen-specific proliferative response confirmed by the simultaneous cytokine prodn. The enhanced antigen-specific secretion of IL-2 and IFN-.gamma. together with the abrogation of IL-10 and the absence of IL-4 indicates that the responses were driven towards a Th1-type rather than Th2-type immune response. The S-iscom formulations minimized the differences in immune responses between the two mouse strains, but the capacity of immune sera to neutralize EBV transformation in vitro remained completely strain-dependent. These data indicate that immune responses generated by iscoms can be manipulated by altering the triterpenoid compn. of the iscoms and that the levels of **triterpenoids** can det. whether or not a Th1-type response is made.

L3 ANSWER 11 OF 28 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1996:445087 CAPLUS
DOCUMENT NUMBER: 125:157883
TITLE: Anti-tumor-promoting activities of **triterpenoids** from ferns. I
AUTHOR(S): Konoshima, Takao; Takasaki, Midori; Masuda, Kazuo; Arai, Yoko; Shiojima, Kenji; Ageta, Hiroyuki; Tokuda, Harukuni
CORPORATE SOURCE: Kyoto Pharmaceutical Univ., Kyoto, 604, Japan
SOURCE: Biological & Pharmaceutical Bulletin (1996), 19(7), 962-965
CODEN: BPBLEO; ISSN: 0918-6158
PUBLISHER: Pharmaceutical Society of Japan
DOCUMENT TYPE: Journal
LANGUAGE: English
AB To search for possible anti-tumor-promoters (cancer chemopreventive agents), the authors carried out primary screening of 23 triterpenoid hydrocarbons isolated from ferns using an in vitro synergistic assay system. Of these **triterpenoids**, hop17(21)-ene, neohop-13(18)-ene, neohop-12-ene, taraxerane, multiflor-9(11)-ene, multiflor-8-ene, glutin-5(10)-ene and taraxastane exhibited remarkable inhibitory effects on **Epstein-Barr** virus (EBV) activation induced by the tumor promoter, 12-O-tetradecanoylphorbol-13-acetate (TPA). Further, compds. hop17(21)-ene and neohop-13(18)-ene exhibited remarkable anti-tumor-promoting effects on mouse skin tumor promotion in an in vivo-two-stage carcinogenesis test using 7,12-dimethylbenz[a]anthracene (DMBA) as an initiator and TPA as a promoter.

L3 ANSWER 12 OF 28 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1996:80532 CAPLUS
DOCUMENT NUMBER: 124:219390
TITLE: Inhibitory effects of lantadenes and related **triterpenoids** on **Epstein-Barr** virus activation
AUTHOR(S): Inada, Akira; Nakanishi, Tsutomu; Tokuda, Harukuni; Nishino, Hoyoku; Iwashima, Akio; Sharma, Om P.
CORPORATE SOURCE: Fac. Pharmacetuical Sci., Setsunan Univ., Osaka, 573-01, Japan
SOURCE: Planta Medica (1995), 61(6), 558-9
CODEN: PLMEAA; ISSN: 0032-0943
PUBLISHER: Thieme
DOCUMENT TYPE: Journal
LANGUAGE: English
AB To search for possible inhibitors of tumor promotion, the inhibitory effects of lantadenes and related **triterpenoids** from Lantana camara L. (Verbenaceae) on **Epstein-Barr** virus activation in Raja cells were tested. The substitutions on the carboxylic acid through an ester bond might play an important role in the activity.

L3 ANSWER 13 OF 28 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1995:919138 CAPLUS
TITLE: New cucurbitan **triterpenoids** from cowania mexicana
AUTHOR(S): Takasaki, M.; Konoshima, T.
CORPORATE SOURCE: Kyoto Pharmaceutical University, Kyoto, 607, Japan
SOURCE: Book of Abstracts, 210th ACS National Meeting, Chicago, IL, August 20-24 (1995), Issue Pt. 1, AGFD-144. American Chemical Society: Washington, D. C.
CODEN: 61XGAC
DOCUMENT TYPE: Conference; Meeting Abstract
LANGUAGE: English
AB In a primary random screening of many plants and crude drugs for possible anti-tumor-promoters, the MeOH ext. of Cowania mexicana showed strong inhibitory effect on **Epstein-Barr** virus activation induced by TPA. Bioassay-directed fractionation of the active ext. led to the isolation of two new cucurbitan **triterpenoids** (1 and 2) together with known compds. (3 and 4). In this paper, we will present their isolation, structural elucidation and biol. activities.

L3 ANSWER 14 OF 28 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1995:918999 CAPLUS
TITLE: Anti-tumor-promoting activities of triterpenoid glycosides - cancer chemoprevention by saponins.
AUTHOR(S): Konoshima, T.
CORPORATE SOURCE: Kyoto Pharmaceutical University, Kyoto, 607, Japan
SOURCE: Book of Abstracts, 210th ACS National Meeting, Chicago, IL, August 20-24 (1995), Issue Pt. 1, AGFD-003. American Chemical Society: Washington, D. C.
CODEN: 61XGAC
DOCUMENT TYPE: Conference; Meeting Abstract
LANGUAGE: English
AB Recentry, many natural products having anti-tumor-promoting activities have been isolated from many medicinal plants. As a continuation of our biol. studies on the potential anti-tumor-promoting activities (cancer chemopreventive agents) of natural products, we have carried out a primary screening test of many Japanese and Chinese folk medicines using their inhibitory effects on **Epstein-Barr** virus early antigen (EBV-EA) activation induced by TPA. Of these compds., several **triterpenoids** exhibied strong inhibitory effects on EBV-EA activation and on two-stage carcinogenesis of mouse skin tumor. In this

paper, the cancer chemopreventive activities of these triterpenoid glycosides (soyasaponin I from Wistaria brachybotrys, gleditsia saponin C from Gleditsia japonica, ginsenoside Rgl from Panax notoginseng etc.) will be presented and discussed.

L3 ANSWER 15 OF 28 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1995:893952 CAPLUS
DOCUMENT NUMBER: 124:21210
TITLE: In vivo inhibitory effects of arjunolic acid derivatives on two-stage carcinogenesis in mouse skin
AUTHOR(S): Diallo, B.; Vanhaelen-Fastre, R.; Vanhaelen, M.; Konoshima, T.; Takasaki, M.; Tokuda, H.
CORPORATE SOURCE: Department of Pharmacognosy and Bromatology, U.L.B., Brussels, 1050, Belg.
SOURCE: Phytotherapy Research (1995), 9(6), 444-7
CODEN: PHYREH; ISSN: 0951-418X
PUBLISHER: Wiley
DOCUMENT TYPE: Journal
LANGUAGE: English
AB In a previous study, arjunolic acid (1) isolated from Cochlospermum tinctorium and its semisynthetic derivs. 2, 3 and 4 were shown to exhibit in vitro inhibitory effects on **Epstein-Barr** virus (EBV) activation. Compds. 3 and 4, which showed the strongest inhibitory activities, were further prepd. from arjunolic acid isolated from Mitragyna ciliata; they were tested in vivo on a two-stage carcinogenesis assay in mouse skin, using dimethylbenz[a]anthracene (DMBA) as initiator and 12-O-tetradecanoylphorbol-13-acetate (TPA) as promoter. The activities were evaluated by both rate (%) of papilloma-bearing mice and av. no. of papillomas per mouse and compared with the control. In the group of mice treated with 3 and 4, the occurrence of papillomas was delayed, compared with the results of the control; with deriv. 4, papillomas occurred in 100% animals only at week 15. These results suggest that arjunolic acid derivs. could be valuable compds. as antitumor-promoters.

L3 ANSWER 16 OF 28 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1995:441845 CAPLUS
DOCUMENT NUMBER: 122:281523
TITLE: Inhibitory effects of cucurbitane **triterpenoids** on **Epstein-Barr** virus activation and two-stage carcinogenesis of skin tumor. II
AUTHOR(S): Konoshima, Takao; Takasaki, Midori; Kozuka, Mutsuo; Nagao, Tsuneatsu; Okabe, Hikaru; Irino, Nobuto; Nakasumi, Tetsuo; Tokuda, Harukuni; Nishino, Hoyoku
CORPORATE SOURCE: Kyoto Pharm. Univ., Kyoto, 607, Japan
SOURCE: Biological & Pharmaceutical Bulletin (1995), 18(2), 284-7
CODEN: BPBLEO; ISSN: 0918-6158
PUBLISHER: Pharmaceutical Society of Japan
DOCUMENT TYPE: Journal
LANGUAGE: English
AB To search for possible anti-tumor-promoters, we carried out a primary screening of twenty-four 29-nor-cucurbitacin glucosides isolated from the roots of Cayaponia tayuya (Cucurbitaceae) using an in vitro synergistic assay system. Of these glucosides, cayaponosides B (5), B3 (7), D (8), D3b (22) and C2 (23) exhibited significant inhibitory effects on **Epstein-Barr** virus (EBV) activation induced by the tumor promoter, 12-O-tetradecanoylphorbol-13-acetate (TPA). Furthermore, 5 and 23 exhibited remarkable anti-tumor-promoting effects on mouse skin tumor promotion in an in vivo two-stage carcinogenesis test.

L3 ANSWER 17 OF 28 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1995:383139 CAPLUS

DOCUMENT NUMBER: 122:185527
TITLE: A triterpene, its manufacture, and cancer inhibitors containing triterpenes
INVENTOR(S): Okada, Naomasa; Takebayashi, Keiichi; Kawashima, Atsushi; Niwano, Mitsuru
PATENT ASSIGNEE(S): Kobe Steel Ltd, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06329590	A2	19941129	JP 1993-121775	19930524

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* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB 3.beta.-(Cis-p-coumaroyloxy)-2.alpha.,23-dihydroxyurs-12-en-28-oic acid (I) is manufd. by culturing callus cells induced from sesame plants. I, 3.beta.-(trans-p-coumaroyloxy)-2.alpha.,23-dihydroxyurs-12-en-28-oic acid (II), and/or esculentic acid (III) are useful as cancer inhibitors. Thus, sesame seed cells were cultured in a medium contg. myo-inositol, glycine, pyridoxine-HCl, nicotinic acid, thiamin-HCl, sucrose, salts, etc. at 35.degree. under light for 7 days, aerobically cultured in the same medium with addn. of 2,4-D and kinetin at 35.degree. and pH 5.7 under light for 10 days, and centrifuged. I 1.2, II 1.6, and III 3.3 mg were isolated from the cells collected. Raji cells were cultured with TPA, n-butyric acid, and 1 .mu.g III/mL at 37.degree. for 48 h to show 61% occurrence of **Epstein-Barr** virus early antigens, vs. 66% for controls cultured with retinoic acid instead of III. Tablets were formulated from I 50, lactose 90, corn starch 29, and Mg stearate 1 g.

L3 ANSWER 18 OF 28 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1995:375056 CAPLUS
DOCUMENT NUMBER: 122:142496
TITLE: Lung cancer inhibitors containing triterpenes
INVENTOR(S): Tokuda, Harukuni; Takebayashi, Keiichi; Kawashima, Atsushi; Niwano, Mitsuru; Mimura, Morio; Takahara, Yoshimasa
PATENT ASSIGNEE(S): Kobe Steel Ltd, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06329537	A2	19941129	JP 1993-121776	19930524

AB Lung cancer inhibitors contain 3.beta.-(cis-p-coumaroyloxy)-2.alpha.,23-dihydroxyurs-12-en-28-oic acid, 3.beta.-(trans-p-coumaroyloxy)-2.alpha.,23-dihydroxyurs-12-en-28-oic acid, and/or esculentic acid as active ingredients. The triterpenes inhibit the activation of **Epstein-Barr** virus (no data). The triterpenes were isolated by extn. of 10 kg cultured cells from sesame seeds with 80% EtOH followed by purifn. Mice were administered s.c. with 4-nitroquinoline 1-oxide for cancer initiation, administered p.o. with water contg. glycerin for cancer

promotion, and then administered with water contg. the triterpenes (at 25 .mu.g/mL) for 25 days to show 40% incidence of tumor, vs. 100%, for controls.

L3 ANSWER 19 OF 28 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1994:600901 CAPLUS
DOCUMENT NUMBER: 121:200901
TITLE: Inhibition of **Epstein-Barr** virus (EBV) activation by triterpenes in Sesamum indicum L. callus
AUTHOR(S): Okada, Naomasa; Takebayashi, Keiichi; Kawashima, Jun; Niwano, Mitsuru; Mimura, Akio; Takahara, Yoshimasa; Tokuda, Harukuni
CORPORATE SOURCE: Biotechnol. Res. Lab., Kobe Steel, Ltd., Tsukuba, 305, Japan
SOURCE: Shokubutsu Soshiki Baiyo (1994), 11(2), 145-9
CODEN: SSBAET; ISSN: 0289-5773
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Two triterpenes, esculentic acid and 3.beta.-(trans-p-coumaroyloxy)-2.alpha.,23-dihydroxyurs-12-en-28-oic acid, were isolated from Sesamum indicum L. callus cells and characterized and their anti-tumor promoter activities were examd. These compds. inhibited **Epstein-Barr** virus (EBV) activation in Raji cells induced by 12-O-tetradecanoylhorbol-13-acetate (TPA) in short-term in vitro assay. The inhibitory effects were nealy equal to those of all-trans-retinoic acid. Viabilities of exponentially growing Raji cells were .apprx.85%. Neither showed any cytotoxicity at 4 .mu.g/mL.

L3 ANSWER 20 OF 28 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1994:473248 CAPLUS
DOCUMENT NUMBER: 121:73248
TITLE: Inhibitory effects of cucurbitane **triterpenoids** on **Epstein-Barr** virus activation and two-stage carcinogenesis of skin tumors
AUTHOR(S): Konoshima, Takao; Takasaki, Midori; Tatsumoto, Takeshi; Kozuka, Mutsuo; Kasai, Ryoji; Tanaka, Osamu; Nie, Rui Lin; Tokuda, Harukuni; Nishino, Hoyoku; Iwashima, Akio
CORPORATE SOURCE: Kyoto Pharmaceutical University, Kyoto, 607, Japan
SOURCE: Biological & Pharmaceutical Bulletin (1994), 17(5), 668-71
CODEN: BPBLEO; ISSN: 0918-6158
DOCUMENT TYPE: Journal
LANGUAGE: English
AB To search for possible anti-tumor-promoters, the authors carried out a primary screening of 21 cucurbitane **triterpenoids** using an in vitro assay system. Of these **triterpenoids**, scandenoside R6 (6), 23,24-dihydrocucurbitacin F (14), 25-acetyl-23,24-dihydrocucurbitacin F (15), 2-O-.beta.-D-glucopyranosyl-23,24-dihydrocucurbitacin F (17) and cucurbitacin F (18) exhibited significant inhibitory effects on **Epstein-Barr** virus (EBV) activation induced by the tumor promoter, 12-O-tetradecanoyl-phorbol-13-acetate (TPA). Further, compds. 14 and 17 exhibited remarkable anti-tumor-promotion effects on mouse skin tumor promotion in an in vivo two-stage carcinogenesis test.

L3 ANSWER 21 OF 28 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1994:430628 CAPLUS
DOCUMENT NUMBER: 121:30628
TITLE: Lanostanoid triterpenes from Ganoderma applanatum
AUTHOR(S): Chairul; Chairul, Sofni M.; Hayashi, Yuji
CORPORATE SOURCE: Res. Dev. Cent. Biol., Indones. Inst. Sci., Bogor, 16122, Indonesia

SOURCE: Phytochemistry (1994), 35(5), 1305-8
CODEN: PYTCAS; ISSN: 0031-9422
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Four minor polyoxygenated lanostanoid triterpenes, named applanoxidic acids E-H, have been isolated from an Indonesian tropical fungus, Ganoderma applanatum. Their structures were detd. by spectroscopic methods and by comparison with previously reported applanoxidic acids A-D. Biol. activity as inhibitors against tumor promoters was obsd. by detg. the inhibitory effect on **Epstein-Barr** virus-assocd. early antigen activation.

L3 ANSWER 22 OF 28 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1994:240074 CAPLUS
DOCUMENT NUMBER: 120:240074
TITLE: Constituents of rosaceous plants. I. Structures of new **triterpenoids** from Cowania mexicana
AUTHOR(S): Konoshima, Takao; Takasaki, Midori; Kozuka, Mutsuo; Haruna, Mitsumasa; Ito, Kazuo; Estes, James R.; Lee, Kuo Hsiung
CORPORATE SOURCE: Kyoto Pharm. Univ., Kyoto, 607, Japan
SOURCE: Chem. Pharm. Bull. (1993), 41(9), 1612-15
CODEN: CPBTAL; ISSN: 0009-2363
DOCUMENT TYPE: Journal
LANGUAGE: English
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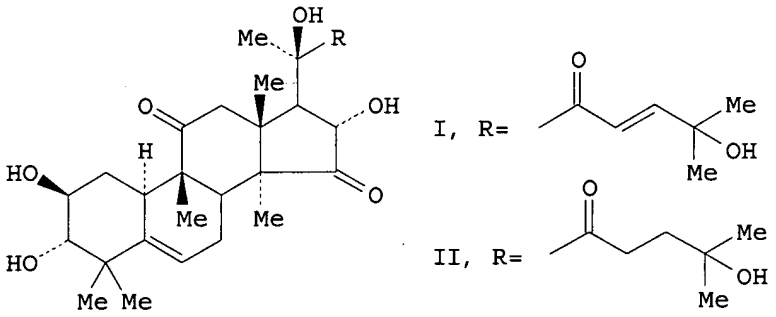

AB Two new cucurbitane type triterpenes, 15-oxo-cucurbitacin F (I) and 15-oxo-23,24-dihydrocucurbitacin F (II), were isolated together with cucurbitacin F and 23,24-dihydrocucurbitacin F from the leaves and branches of C. mexicana (Rosaceae). These triterpenes were inhibitors of **Epstein-Barr** virus early antigen activation induced by 12-O-tetradecanoylphorbol-13-acetate, a well-known tumor-promoter. The structures of I and II were detd. from 2D-NMR spectral data and NOE difference expts.

L3 ANSWER 23 OF 28 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1993:468096 CAPLUS
DOCUMENT NUMBER: 119:68096
TITLE: Phytochemical studies on meliaceous plants. VIII. Structures and inhibitory effects on **Epstein -Barr** virus activation of **triterpenoids** from leaves of Chisocheton macrophyllus King
AUTHOR(S): Inada, Akira; Somekawa, Midori; Murata, Hiroko; Nakanishi, Tsutomu; Tokuda, Harukuni; Nishino, Hoyoku; Iwashima, Akio; Darnaedi, Dedy; Jurata, Jin

CORPORATE SOURCE: Fac. Pharm. Sci., Setsunan Univ., Hirakata, 573-01, Japan
SOURCE: Chem. Pharm. Bull. (1993), 41(3), 617-19
CODEN: CPBTAL; ISSN: 0009-2363
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A 24-epimeric mixt. of a new triterpenoid, 24-hydroxydammara-20,25-dien-3-one , and two known **triterpenoids**, moronic acid and betulonic acid , were isolated from leaves of Chisocheton macrophyllus, and the inhibitory effects of these **triterpenoids** on **Epstein-Barr** virus early antigen (EBV-EA) activation induced by 12-O-tetradecanoylphorbol-13-acetate were tested.

L3 ANSWER 24 OF 28 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1992:124485 CAPLUS
DOCUMENT NUMBER: 116:124485
TITLE: Two novel homolanostane triterpenes, an antitumor promoter, from an Indonesian Ganoderma fungi
AUTHOR(S): Chairul; Chairul, Sofni M.; Takashi T.; Yuji, H.
CORPORATE SOURCE: Fac. Sci., Osaka City Univ., Osaka, 558, Japan
SOURCE: Acta Pharm. Indones. (1989), 14(4), 181-92
CODEN: APINEK; ISSN: 0216-616X
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Two new homolanostane triterpenes were isolated from fruit bodies of an Indonesian Sanoderoa sp. (Polyporaceae) and detd. to be 16.alpha.-hydroxy-24-methyl-5.alpha.-lanosta7:9(11):25(27)-trien-26-oic acid and its regioisomer. Some antitumor activity was obsd. on the basis of **Epstein-Barr** virus bioassay.

L3 ANSWER 25 OF 28 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1991:628320 CAPLUS
DOCUMENT NUMBER: 115:228320
TITLE: Constituents of leguminous plants, XIII. New triterpenoid saponins from Wistaria brachybotrys
AUTHOR(S): Konoshima, Takao; Kozuka, Mutsuo; Haruna, Mitsumasa; Ito, Kazuo
CORPORATE SOURCE: Kyoto Pharm. Univ., Kyoto, 607, Japan
SOURCE: J. Nat. Prod. (1991), 54(3), 830-6
CODEN: JNPRDF; ISSN: 0163-3864
DOCUMENT TYPE: Journal
LANGUAGE: English
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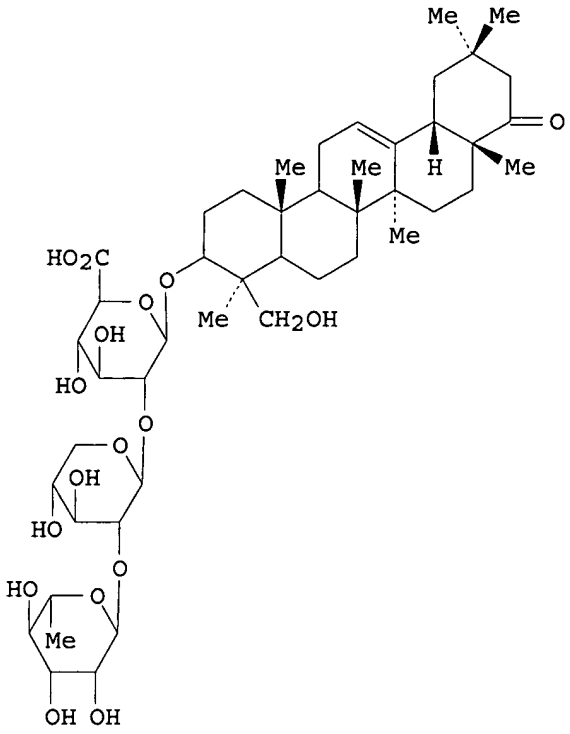

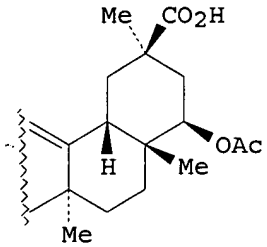

I II

AB Two new triterpenoid saponins, wistariasaponins D (I) and G (II), and the known saponin dehydrosoyasaponin I were isolated from the knots of Wistaria brachybotrys. The structures of I and II were detd. from their chem. and physicochem. evidence. The inhibitory effects of these saponins on the activation of **Epstein-Barr** virus early antigen that was induced by a tumor promoter were also tested for the primary screening of antitumor-promoting activities.

L3 ANSWER 26 OF 28 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1990:195188 CAPLUS
DOCUMENT NUMBER: 112:195188
TITLE: Studies on the constituents of leguminous plants. XII. The structures of new triterpenoid saponins from Wistaria brachybotrys Sieb. et Zucc
AUTHOR(S): Konoshima, Takao; Kozuka, Mutsuo; Haruna, Mitsumasa; Ito, Kazuo; Kimura, Takeatsu; Tokuda, Harukuni
CORPORATE SOURCE: Kyoto Pharm. Univ., Kyoto, 607, Japan
SOURCE: Chem. Pharm. Bull. (1989), 37(10), 2731-5
CODEN: CPBTAL; ISSN: 0009-2363
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Four new triterpenoid saponins (wistariasponins A, B1, B2 and C) were isolated as Me esters from the knots of W. brachybotrys (Leguminosae), and their structures were characterized as 3-O-[.alpha.-L-rhamnopyranosyl-(1.fwdarw.2)-.beta.-D-xylopyranosyl(1.fwdarw.2)-.beta.-D-glucuronopyranosyl]wistariasapogenol A, 3-O-[.alpha.-L-rhamnopyranosyl(1.fwdarw.2)-.beta.-D-xylopyranosyl(1.fwdarw.2)-.beta.-D-glucuronopyranosyl]wistariasapogenol B, 3-O-[.alpha.-L-rhamnopyranosyl(1.fwdarw.2)-.beta.-D-galactopyranosyl(1.fwdarw.2)-.beta.-D-glucuronopyranosyl]wistariasapogenol B and 3-O-[.alpha.-L-rhamnopyranosyl(1.fwdarw.2)-.beta.-D-xylopyranosyl-(1.fwdarw.2)-.beta.-D-glucuronopyranosyl]soyasapogenol B, resp., on the basis of chem. and physicochem. evidence. The inhibitory effects of these saponins and sapogenols on **Epstein-Barr** virus activation induced by a tumor promoter were also tested.

L3 ANSWER 27 OF 28 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1990:95514 CAPLUS
DOCUMENT NUMBER: 112:95514
TITLE: Isolation of a new cycloartanoid triterpene from leaves of Lansium domesticum: novel skin-tumor promotion inhibitors
AUTHOR(S): Nishizawa, Mugio; Emura, Makoto; Yamada, Hidetoshi; Shiro, Motoo; Chairul; Hayashi, Yuji; Tokuda, Harukuni
CORPORATE SOURCE: Fac. Pharm. Sci., Tokushima Bunri Univ., Tokushima, 770, Japan
SOURCE: Tetrahedron Lett. (1989), 30(41), 5615-18
CODEN: TELEAY; ISSN: 0040-4039
DOCUMENT TYPE: Journal
LANGUAGE: English
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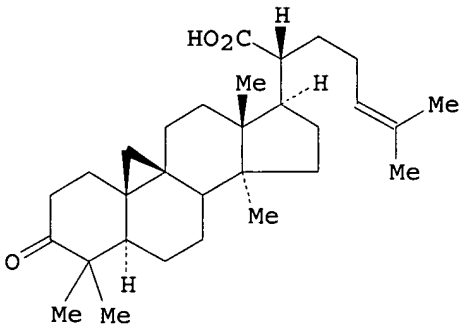

I

AB A new cycloartanoid triterpene, 3-oxo-24-cycloarten-21-oic acid (I), was isolated from leaves of L. domesticum, and its structure was established on the basis of spectral and an x-ray diffraction studies. Some derivs. of I show significant inhibitory activity of skin-tumor promotion on the basis of **Epstein-Barr** virus activation.

L3 ANSWER 28 OF 28 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1989:566781 CAPLUS
DOCUMENT NUMBER: 111:166781
TITLE: Studies on inhibitors of skin-tumor promotion. Inhibitory effects of triterpenes from Cochlospermum tinctorium on **Epstein-Barr** virus activation
AUTHOR(S): Diallo, Bilo; Vanhaelen, M.; Vanhaelen-Fastre, R.; Konoshima, Takao; Kozuka, Mutsuo; Tokuda, Harukuni
CORPORATE SOURCE: Dep. Pharmacogn., ULB, Brussels, 1050, Belg.
SOURCE: J. Nat. Prod. (1989), 52(4), 879-81
CODEN: JNPRDF; ISSN: 0163-3864
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 111:166781
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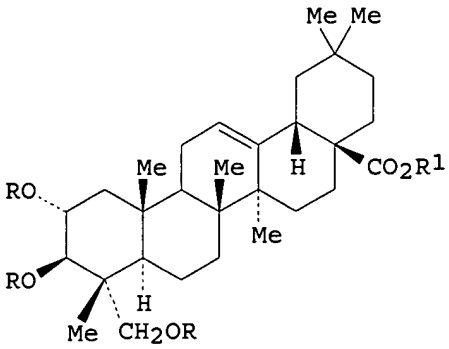

I, R=R^1=H

II, R=H, R^1=Me

III, R=Ac, R^1=H

IV, R=Ac, R^1=Me

AB Arjunolic acid (I), an oleanene-type triterpene isolated from the rhizome of C. tinctorium, and its acetate (II) and Me ester derivs. (III and IV) were tested using the short-term in vitro assay on **Epstein-Barr** virus early antigen activation in Raji cells induced by 12-O-tetradecanoylphorbol 13-acetate. Their inhibitory effects on skin tumor promoters were greater than those of previously studied natural products.

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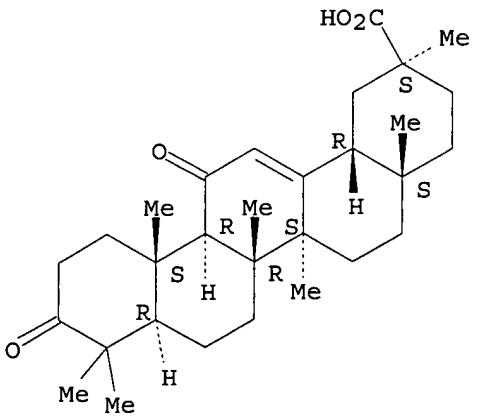
L4 ANSWER 1 OF 49 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2002:18331 CAPLUS
DOCUMENT NUMBER: 136:226299
TITLE: Influence of honey on the gastrointestinal metabolism and disposition of glycyrrhizin and glycyrrhetic acid in rabbits
AUTHOR(S): Ching, Hui; Hou, Yu-Chi; Hsiu, Su-Lan; Tsai, Shang-Yuan; Chao, Pei-Dawn Lee
CORPORATE SOURCE: Graduate Institute of Chinese Pharmaceutical Sciences, China Medical College, Taichung, Taiwan
SOURCE: Biological & Pharmaceutical Bulletin (2002), 25(1), 87-91
CODEN: BPBLEO; ISSN: 0918-6158
PUBLISHER: Pharmaceutical Society of Japan
DOCUMENT TYPE: Journal
LANGUAGE: English

AB To investigate the effects of honey on the pharmacokinetics of glycyrrhizin and glycyrrhetic acid, administration of glycyrrhizin or glycyrrhetic acid with and without honey was carried out in rabbits in a randomized crossover design. An in vitro study using rabbit fecal flora was employed to elucidate the mechanism of the interaction. HPLC methods were used for the detn. of glycyrrhizin, glycyrrhetic acid and 3-dehydroglycyrrhetic acid concns. in serum and feces. Paired and unpaired Student's t-tests were used for statistical comparisons for in vivo and in vitro studies, resp. Our study indicated that the area under the curve (AUC0-t) of glycyrrhetic acid was significantly enhanced by 53% when honey was concomitantly given with glycyrrhizin, whereas that of glycyrrhizin was not significantly altered. Nevertheless, lack of effect was obsd. when honey was concurrently given with glycyrrhetic acid. Fecal study indicated that both the hydrolysis of glycyrrhizin to glycyrrhetic acid and subsequent oxidn. of glycyrrhetic acid to 3-dehydroglycyrrhetic acid were significantly affected in the presence of honey to result in more glycyrrhetic acid available for absorption. It could be concluded that honey significantly affected the gastrointestinal metab. of glycyrrhizin and resulted in the increased glycyrrhetic acid exposure. Therefore, honey might enhance the efficacy and adverse effects of glycyrrhizin.

IT **7020-50-0**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(influence of honey on gastrointestinal metab. and disposition of glycyrrhizin and glycyrrhetic acid in rabbits)

RN 7020-50-0 CAPLUS
CN Olean-12-en-29-oic acid, 3,11-dioxo-, (20.beta.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

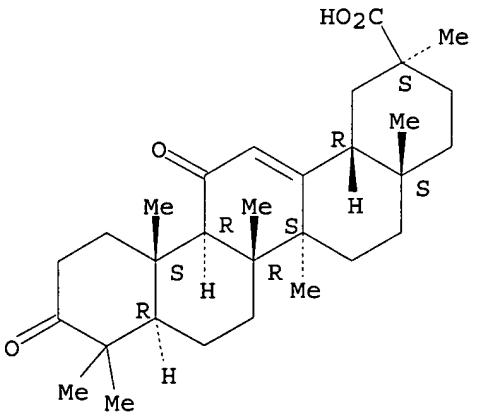
L4 ANSWER 2 OF 49 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:690731 CAPLUS
DOCUMENT NUMBER: 136:363211
TITLE: Comparison of pharmacokinetics between glycyrrhizin and glycyrrhetic acid in rabbits
AUTHOR(S): Ching, Hui; Hsiu, Su-Lan; Hou, Yu-Chi; Chen, Chung-Chuan; Chao, Pei-Dawn Lee
CORPORATE SOURCE: Inst. of Chinese Pharmaceutical Sciences, Department of Pharmacy, China Medical College, Taichung, 404, Taiwan
SOURCE: Yaowu Shipin Fenxi (2001), 9(2), 67-71
CODEN: YSFEEP; ISSN: 1021-9498
PUBLISHER: National Laboratories of Food and Drugs, Dep. of Health, Executive Yuan
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Glycyrrhizin is a bioactive natural glycoside. Glycyrrhetic acid is an aglycon and an active metabolite of glycyrrhizin. The anti-inflammatory activity of glycyrrhetic acid is even stronger than that of glycyrrhizin and glycyrrhetic acid is responsible for the adverse effect of aldosteronism. This study attempted to compare the pharmacokinetics of glycyrrhetic acid after oral administration of equal molar doses of glycyrrhizin and glycyrrhetic acid to rabbits. Six New Zealand White rabbits were orally given glycyrrhizin or glycyrrhetic acid at a dose of 178.5 .mu.mol kg-1 in a randomized crossover design. HPLC methods were used to det. the serum concns. of glycyrrhizin and glycyrrhetic acid. A noncompartment model was used to calc. the pharmacokinetic parameters and a paired Student's t-test was used for statistical comparison. The results indicated that in addn. to the absorption of glycyrrhizin per se at small intestine, oral dosing of glycyrrhizin resulted in higher AUC0-1 and MRT of glycyrrhetic acid by 443% and 354%, resp., than those after oral dosing of glycyrrhetic acid. It can be concluded that glycyrrhizin is a good prodrug of glycyrrhetic acid.

IT **7020-50-0**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(oral pharmacokinetics of glycyrrhizin and glycyrrhetic acid in rabbits)

RN 7020-50-0 CAPLUS
CN Olean-12-en-29-oic acid, 3,11-dioxo-, (20.beta.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

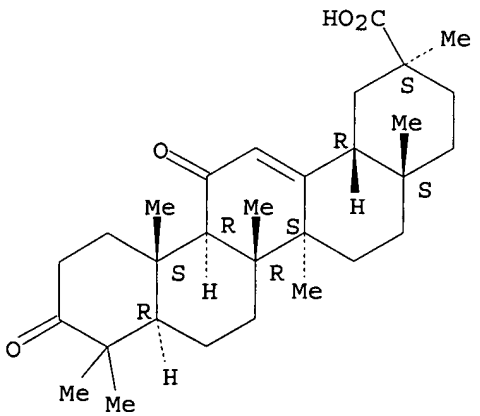
L4 ANSWER 3 OF 49 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:863193 CAPLUS
DOCUMENT NUMBER: 134:246843
TITLE: Differences in the metabolism of glycyrrhizin, glycyrrhetic acid and glycyrrhetic acid monoglucuronide by human intestinal flora
AUTHOR(S): Akao, Taiko
CORPORATE SOURCE: Faculty of Pharmaceutical Sciences, Toyama Medical and Pharmaceutical University, Toyama, 930-0194, Japan
SOURCE: Biological & Pharmaceutical Bulletin (2000), 23(12), 1418-1423
CODEN: BPBLEO; ISSN: 0918-6158
PUBLISHER: Pharmaceutical Society of Japan
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Glycyrrhizin (1.0 mM GL), glycyrrhetic acid (1.0 mM GA) and glycyrrhetic acid monoglucuronide (1.0 mM GAMG), as well as a combination of all components added to medium at the start of growth and at the maximal stage of intestinal flora were cultured for 24 and 12 h, resp. GL alone enhanced GL .beta.-D-glucuronidase activity about 2.7- to 6.8-fold and was metabolized to between 55 and almost 100% GA. GAMG alone was metabolized to almost 100% GA by GAMG .beta.-D-glucuronidase activity. Intestinal flora grown to a maximal stage converted GL to about 15% GA and GAMG to about 13% GA at almost 0 h. GL in combined GL and GA was consumed about 20% at 12 h and about 100% at 24 h under different culture conditions. Metabolite GA and unchanged GA were metabolized to a negligible amt. of 3-oxoglycyrrhetic acid, 3.alpha.-hydroxyglycyrrhetic acid (3.alpha.-hydroxyGA) or both by 3.beta.-hydroxysteroid dehydrogenase and 3.alpha.-hydroxyGA dehydrogenase activities. Combined GL and GAMG consumed about 90% and 100% GAMG at 24 h and 12 h, resp., regardless of culture conditions, and the consumption of GL was non-existent or negligible. Consumption of combined GL, GA and GAMG was similar to that of both combined GL and GA and combined GL and GAMG. It was found that intestinal flora can metabolize GL alone, but does not readily metabolize GL when present among its metabolites contg. GL.

IT **7020-50-0**, 3-Oxoglycyrrhetic acid
RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)
(differences in the metab. of glycyrrhizin, glycyrrhetic acid and glycyrrhetic acid monoglucuronide by human intestinal flora)

RN 7020-50-0 CAPLUS
CN Olean-12-en-29-oic acid, 3,11-dioxo-, (20.beta.)- (9CI) (CA INDEX NAME)

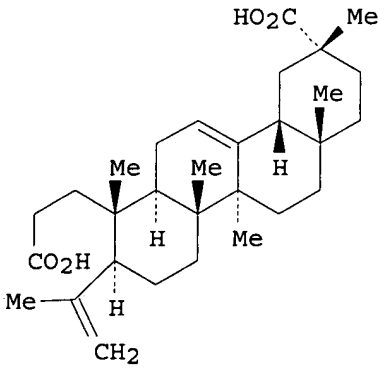
Absolute stereochemistry. Rotation (+).



REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 4 OF 49 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:216505 CAPLUS
DOCUMENT NUMBER: 133:2531
TITLE: Bioactive 12-oleanene triterpene and secotriterpene acids from Maytenus undata
AUTHOR(S): Muhammad, Ilias; El Sayed, Khalid A.; Mossa, Jaber S.; Al-Said, Mansour S.; El-Feraly, Farouk S.; Clark, Alice M.; Hufford, Charles D.; Oh, Stephen; Mayer, Alejandro M. S.
CORPORATE SOURCE: Medicinal Aromatic and Poisonous Plants Research Center (MAPPRC) and Department of Pharmacognosy College of Pharmacy, King Saud University, Riyadh, 11451, Saudi Arabia
SOURCE: Journal of Natural Products (2000), 63(5), 605-610
CODEN: JNPRDF; ISSN: 0163-3864
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



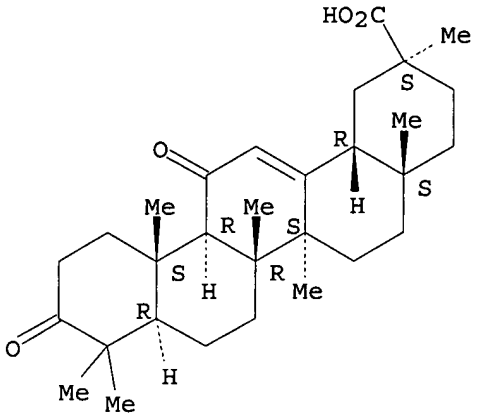
I

AB The aerial parts of Maytenus undata yielded four new 12-oleanene and 3,4-seco-12-oleanene triterpene acids, namely, 3-oxo-11.alpha.-methoxyolean-12-ene-30-oic acid, 3-oxo-11.alpha.-hydroxyolean-12-ene-30-oic acid, 3-oxo-olean-9(11),12-diene-30-oic acid, and 3,4-seco-olean-4(23),12-diene-3,29-dioic acid (20-epi-koetjapic acid), together with the known 3,11-dioxoolean-12-ene-30-oic acid (3-oxo-18.beta.-glycyrrhetinic acid), koetjapic acid , and the 12-oleanene artifact 3-oxo-11.alpha.-ethoxyolean-12-ene-30-oic acid. Koetjapic acid inhibited the growth of Staphylococcus aureus, methicillin-resistant S. aureus, and Pseudomonas aeruginosa, with an MIC range of 3.125-6.25 .mu.g/mL. The new 3,4-secotriterpene acid 20-epi-koetjapic acid (I) potently inhibited rat neonatal brain microglia phorbol ester-stimulated thromboxane B2 (IC50 = 0.5 .mu.M) and superoxide anion (IC50 = 1.9 .mu.M) generation.

IT **7020-50-0**
RL: BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(1bioactive 12-oleanene triterpene and secotriterpene acids from Maytenus undata)

RN 7020-50-0 CAPLUS
CN Olean-12-en-29-oic acid, 3,11-dioxo-, (20.beta.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

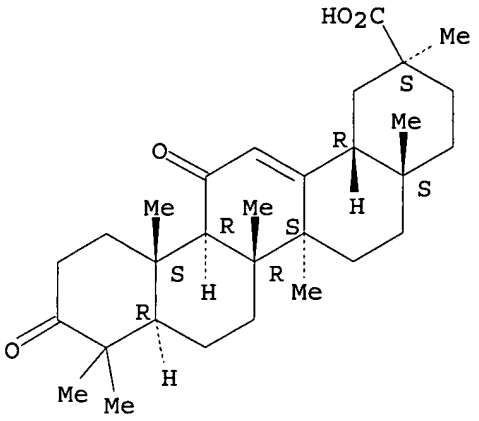
L4 ANSWER 5 OF 49 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:69199 CAPLUS
DOCUMENT NUMBER: 132:231479
TITLE: Effects of glycyrrhizin and glycyrrhetic acid on the growth, glycyrrhizin .beta.-D-glucuronidase and 3.beta.-hydroxysteroid dehydrogenase of human intestinal bacteria
AUTHOR(S): Akao, Taiko
CORPORATE SOURCE: Faculty of Pharmaceutical Sciences, Toyama Medical and Pharmaceutical University, Toyama, 930-0194, Japan
SOURCE: Biological & Pharmaceutical Bulletin (2000), 23(1), 104-107
CODEN: BPBLEO; ISSN: 0918-6158
PUBLISHER: Pharmaceutical Society of Japan
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The peak of glycyrrhizin (GL) .beta.-D-glucuronidase activity for Ruminococcus sp. PO1-3 and Eubacterium sp. GLH changed to 24 h from 12 h of culture and to 12 h from 48 h, resp., at almost the same level by the addn. of 1.0 mM GL. This enzyme activity was about 20-fold higher in Eubacterium sp. GLH than in Ruminococcus sp. PO1-3. GL .beta.-D-glucuronidase activity of Ruminococcus sp. PO1-3 with Eubacterium sp. GLH and the intestinal flora showed a maximal peak at 12 h of culture in the presence and absence of 1.0 mM GL. This enzyme activity was about 2.5-fold higher in mixed bacteria than in intestinal flora. 3.beta.-Hydrosteroid dehydrogenase activity of Ruminococcus sp. PO1-3 and Ruminococcus sp. PO1-3 with Eubacterium sp. GLH was suppressed greater in the presence of GL than without GL. Also, Ruminococcus sp. PO1-3, Eubacterium sp. GLH, and a mixt. of both and intestinal flora, metabolized 1.0 mM GL to glycyrrhetic acid (GA) in yields of about 10, 70, 40 and 100%, resp., with 24 h culture. From the level of GL .beta.-D-glucuronidase activity, it is considered that the metab. of GL by intestinal flora is due to both enzymic and non-enzymic reactions. Moreover, GA at a concn. of 1.0 mM suppressed growth of Ruminococcus sp. PO1-3, Eubacterium sp. GLH, and the mixt. of both and intestinal flora, which metabolized 1.0 mM GA to a negligible amt. of 3-oxo-glycyrrhetic acid, indicating the accumulation of unchanged GA. GL .beta.-D-glucuronidase activity of intestinal flora was enhanced by GA, which stimulated bacteria possessing particular this characteristic.

IT **7020-50-0**, 3-Oxo-glycyrrhetic acid
RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)
(effects of glycyrrhizin and glycyrrhetic acid on the growth, glycyrrhizin .beta.-D-glucuronidase and 3.beta.-hydroxysteroid

dehydrogenase of human intestinal bacteria)
RN 7020-50-0 CAPLUS
CN Olean-12-en-29-oic acid, 3,11-dioxo-, (20.beta.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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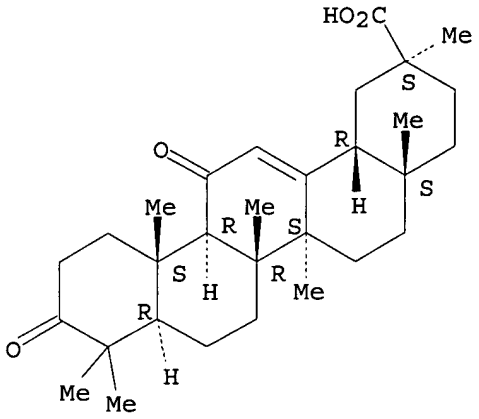
L4 ANSWER 6 OF 49 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:69180 CAPLUS
DOCUMENT NUMBER: 132:216507
TITLE: Hasty effect on the metabolism of glycyrrhizin by Eubacterium sp. GLH with Ruminococcus sp. PO1-3 and Clostridium innocuum ES24-06 of human intestinal bacteria
AUTHOR(S): Akao, Taiko
CORPORATE SOURCE: Faculty of Pharmaceutical Sciences, Toyama Medical and Pharmaceutical University, Toyama, 930-0194, Japan
SOURCE: Biological & Pharmaceutical Bulletin (2000), 23(1), 6-11
CODEN: BPBLEO; ISSN: 0918-6158
PUBLISHER: Pharmaceutical Society of Japan
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Eubacterium sp. GLH with Ruminococcus sp. PO1-3 and Clostridium innocuum ES24-06 possessing enzymes-involved in the metab. of glycyrrhizin (GL) was cultured in GAM medium with and without 1.0 mM GL or 1.0 mM glycyrrhetic acid (GA). GL (1.0 mM) enhanced 3.alpha.-hydroxyglycyrrhetinate (3.alpha.-hydroxyGA) dehydrogenase activity, GA (1.0 mM) suppressed 3.alpha.-hydroxyGA dehydrogenase activity, GL .beta.-D-glucuronidase activity and the mixed bacterial growth, and GL and GA showed almost no change in a lower level of 3.beta.-hydroxysteroid dehydrogenase (3.beta.-HSD) activity during 5 d of culture. GL (1.0 mM) and GA (1.0 mM) were metabolized to a small amt. of GA and a negligible amt. of 3-oxo-glycyrrhetic acid (3-oxo-GA) and 3.alpha.-hydroxyGA, and to a negligible amt. of 3-oxo-GA, resp., by these mixed bacteria. These amts. coincided with those of metabolites produced from 1.0 mM GL and 1.0 mM GA added to these mixed bacteria after 24 h culture. Whole bacteria and sonicated bacteria derived from the collection of these mixed bacteria reached a maximal stage and metabolized GL to a relatively large amt. of GA and 3-oxo-GA, and a negligible amt. of 3.alpha.-hydroxyGA and GA to a small amt. of 3-oxo-GA and 3.alpha.-hydroxyGA within 180 min. GL .beta.-D-glucuronidase with 3.beta.-HSD and 3.alpha.-hydroxyGA

dehydrogenase partially purified from each bacterium converted GL to 3.alpha.-hydroxyGA, producing metabolites of about 60% after 10 min of incubation. These mixed bacteria possessed high enzyme activities could produce the metabolites of GL in under one hour under conditions.

IT **7020-50-0**, 3-Oxo-glycyrrhetic acid
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(metab. of glycyrrhizin by Eubacterium sp. GLH with Ruminococcus sp. PO1-3 and Clostridium innocuum ES24-06 of human intestinal bacteria and effect on bacterial enzymes and growth)

RN 7020-50-0 CAPLUS
CN Olean-12-en-29-oic acid, 3,11-dioxo-, (20.beta.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

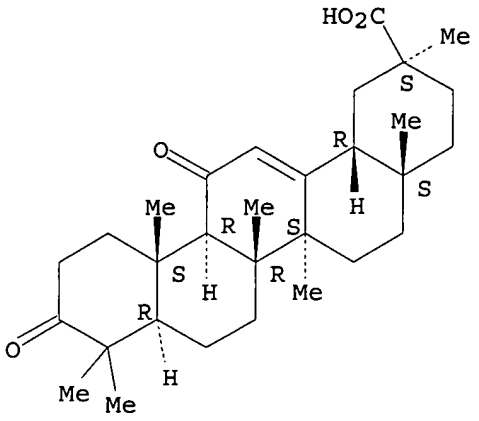
L4 ANSWER 7 OF 49 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:778644 CAPLUS
DOCUMENT NUMBER: 132:86161
TITLE: (+)-3-Oxoglycyrrhetinic acid: catemeric hydrogen bonding in a non-racemic triterpenoid diketo acid
AUTHOR(S): Brunskill, Andrew P. J.; Thompson, Hugh W.; Lalancette, Roger A.
CORPORATE SOURCE: Carl A. Olson Memorial Laboratories, Department of Chemistry, Rutgers University, Newark, NJ, 07102, USA
SOURCE: Acta Crystallographica, Section C: Crystal Structure Communications (1999), C55(11), 1902-1905
CODEN: ACSCEE; ISSN: 0108-2701
PUBLISHER: Munksgaard International Publishers Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The crystal structure of the title compd., (+)-10,13-dioxo-2.alpha.,4a.beta.,6a.alpha.,6b.beta.,9,9,12a.beta.-heptamethyl-1,2,3,4,4a,5,6,6a,6b,7,8,8a.alpha.,9,10,11,12,12a,12b.alpha.,13,14b.beta.-icosahydropicene-2.beta.-carboxylic acid, C30H44O4, involves carboxyl-to-ketone H-bonding catemers. Distorted H bonds progress from the carboxyl H atom of one mol. to the remote-ring ketone O atom of a screw-related neighbor [O...O = 2.975(5) .ANG.], yielding helical H-bonding chains which proceed in the b direction. Two C-H...O close contacts were found, connecting the unsatd. ketone (2.71 .ANG.) and the acid carbonyl (2.55 .ANG.) to sep. screw-related neighbors. Crystallog. data are given.

IT **7020-50-0**
RL: PRP (Properties)

(crystal structure and hydrogen bonding of)
RN 7020-50-0 CAPLUS
CN Olean-12-en-29-oic acid, 3,11-dioxo-, (20.beta.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 8 OF 49 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:547388 CAPLUS
DOCUMENT NUMBER: 131:280962
TITLE: Influence of various bile acids on the metabolism of glycyrrhizin and glycyrrhetic acid by Ruminococcus sp. PO1-3 of human intestinal bacteria
AUTHOR(S): Akao, Taiko
CORPORATE SOURCE: Faculty of Pharmaceutical Sciences, Toyama Medical and Pharmaceutical University, Toyama, 930-0194, Japan
SOURCE: Biological & Pharmaceutical Bulletin (1999), 22(8), 787-793
CODEN: BPBLEO; ISSN: 0918-6158
PUBLISHER: Pharmaceutical Society of Japan
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Ruminococcus sp. PO1-3, an intestinal bacterium isolated from human feces, metabolized glycyrrhizin (GL) to glycyrrhetic acid (GA) and GA to 3-oxo-glycyrrhetic acid (3-oxo-GA) and possessed GL .beta.-D-glucuronidase and 3.beta.-hydroxysteroid dehydrogenase (3.beta.-HSD) involved in the metab. of GL. This bacterial growth was enhanced by GL at a concn. of 0.4 mM and was suppressed by GA at concn. of 1.0 mM. Chenodeoxycholic acid, deoxycholic acid and lithocholic acid among the bile acids added to this bacterium suppressed the growth and GL .beta.-D-glucuronidase activity and 3.beta.-HSD activity incident to it at a concn. of 1.0 mM, while cholic acid, hyodeoxycholic acid and glycine and taurine conjugates of cholic acid, chenodeoxycholic acid, deoxycholic acid and lithocholic acid had almost no effect on this bacterium at a concn. of 0.2 to 1.0 mM. However, these enzyme activities of this sonicated bacteria were inhibited by all of these bile acids. Although each bile acid and GL added to bacteria at the same time suppressed the growth and the amt. of metabolite GA by all bile acids used except cholic acid, taurocholic acid and taurodeoxycholic acid with GL, a combination of each bile acid and GA eased the growth inhibition caused by GA at a concn. of 0.2 mM and enhanced the amt. of metabolite 3-oxo-GA by the glycine conjugate of bile acids with GA. GL or GA added after 6 h culture with each of these bile acids and bacteria was metabolized to a relatively large amt. of GA by chenodeoxycholic acid and lithocholic acid and their glycine and taurine conjugates, glycocholic acid and taurodeoxycholic acid, or had almost no effect on the amt. of

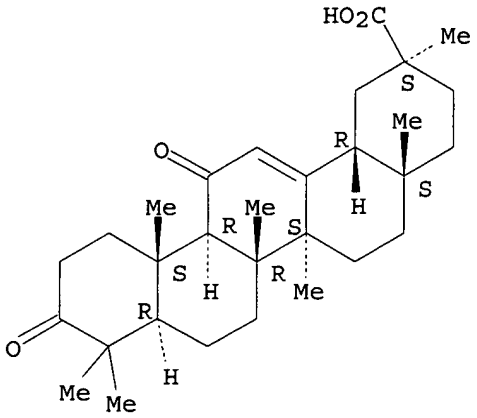
metabolite 3-oxo-GA, resp. These results showed that although GL added after the exposure to bile acid and GA and bile acid added at the same time as bacteria had different bile acid action, these conditions enhanced the amt. of metabolite GA from GL and metabolite 3-oxo-GA from GA.

IT **7020-50-0**, 3-Oxo-glycyrrhetic acid
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(effect of bile acids on metab. of glycyrrhizin and glycyrrhetic acid by Ruminococcus of human intestinal bacteria)

RN 7020-50-0 CAPLUS

CN Olean-12-en-29-oic acid, 3,11-dioxo-, (20.beta.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 9 OF 49 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1998:700683 CAPLUS

DOCUMENT NUMBER: 130:75703

TITLE: Distribution of enzymes involved in the metabolism of glycyrrhizin in various organs of rat

AUTHOR(S): Akao, Taiko

CORPORATE SOURCE: Faculty of Pharmaceutical Sciences, Toyama Medical and Pharmaceutical University, Toyama, 930-0194, Japan

SOURCE: Biological & Pharmaceutical Bulletin (1998), 21(10), 1036-1044
CODEN: BPBLEO; ISSN: 0918-6158

PUBLISHER: Pharmaceutical Society of Japan

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Glycyrrhizin (GL) was hydrolyzed to glycyrrhetic acid (GA), glycyrrhetic acid mono-.beta.-D-glucuronide (GAMG) or both by glucuronidases in various organs of rat. GL .beta.-D-glucuronidase I, hydrolyzing GL to GA; GAMG .beta.-D-glucuronidase, hydrolyzing GAMG to GA; and 3.alpha.-hydroxyglycyrrhetinate (3.alpha.-hydroxyGA) dehydrogenase, oxidizing 3.alpha.-hydroxyGA to 3-oxo-GA were found in the organs of this animal. GL .beta.-D-glucuronidase II was distributed in the lysosomal fraction of all organs except brain; 3.alpha.-hydroxyGA dehydrogenase was distributed in the microsomal fraction of the liver; but other enzymes were distributed in the nuclear, lysosomal, microsomal and sol. fractions of a variety of organs. GL .beta.-D-glucuronidase I, GL .beta.-D-glucuronidase II and GAMG .beta.-D-glucuronidase activities in a mixt. of lysosomes and microsomes of rat liver exhibited different patterns on hydroxyapatite column chromatog. These results showed the metabolic pathways of GL to be of two types: a .beta.-D-glucuronidase hydrolyzing GL to GA, and the other

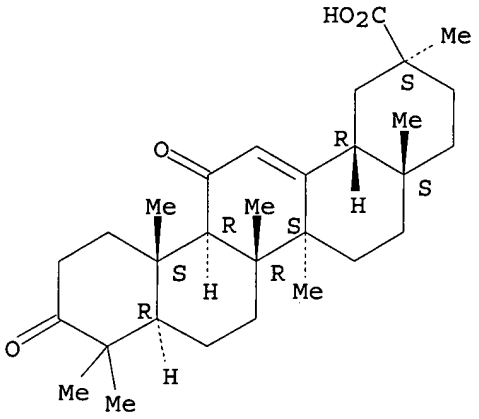
consisting of two different .beta.-D-glucuronidases hydrolyzing GL to GAMG and GAMG to GA.

IT **7020-50-0**, 3-Oxoglycyrrhetic acid
RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)
(distribution of glucuronidase enzymes involved in metab. of glycyrrhizin in various organs of rat)

RN 7020-50-0 CAPLUS

CN Olean-12-en-29-oic acid, 3,11-dioxo-, (20.beta.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 10 OF 49 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1997:137414 CAPLUS

DOCUMENT NUMBER: 126:236430

TITLE: Localization of enzymes involved in metabolism of glycyrrhizin in contents of rat gastrointestinal tract

AUTHOR(S): Akao, Taiko

CORPORATE SOURCE: Faculty of Pharmaceutical Sciences, Toyama Medical and Pharmaceutical University, Toyama, 930-01, Japan

SOURCE: Biological & Pharmaceutical Bulletin (1997), 20(2), 122-126
CODEN: BPBLEO; ISSN: 0918-6158

PUBLISHER: Pharmaceutical Society of Japan

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Most digested food 2 h after overnight feeding in rat remained in the stomach, duodenum, upper small intestine, lower small intestine, cecum, and colon, all of which indicated pH between 4 and 7 and had glycyrrhizin (GL) hydrolyzing activity. This enzyme activity was highest in the cecal and colonic contents among all gastrointestinal contents. Also, 3.alpha.-hydroxyglycyrrhetic acid (3.alpha.-hydroxyGA) and 3.beta.-hydroxyglycyrrhetic acid (3.beta.-hydroxyGA) oxidizing enzymes were localized in the same cecal content. Namely, rat gastrointestinal bacteria had the ability to hydrolyze GL to 3.beta.-hydroxyGA by glycyrrhizin .beta.-D-glucuronidase and to oxide 3.beta.-hydroxyGA and 3.alpha.-hydroxyGA to 3-oxoGA by 3.beta.-hydroxyglycyrrhetinate dehydrogenase and 3.alpha.-hydroxyglycyrrhetinate dehydrogenase, resp. In media of pH 1 to pH 10, metabolites 3.beta.-hydroxyGA, 3-oxoGA and 3.alpha.-hydroxyGA obtained from the metab. of GL were highest at pH 8. The intestinal contents at pH 6 or pH 7 were able to produce the metabolite 3.beta.-hydroxyGA by the metab. of GL. However, the stomach content at pH 4.2 was lowest in the metabolite 3.beta.-hydroxyGA. It is unknown whether or not GL is metabolized to 3.beta.-hydroxyGA by the

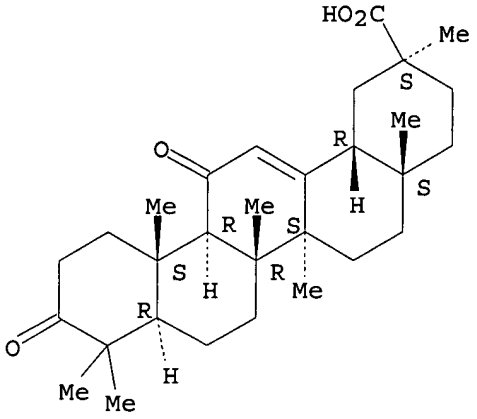
stomach content in vivo.

IT **7020-50-0**, 3-Oxoglycyrrhetic acid
RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)
(localization of enzymes involved in metab. of glycyrrhizin in contents of rat gastrointestinal tract)

RN 7020-50-0 CAPLUS

CN Olean-12-en-29-oic acid, 3,11-dioxo-, (20.beta.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



=> d l4 11-15 ibib abs hitstr

L4 ANSWER 11 OF 49 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1996:464384 CAPLUS
DOCUMENT NUMBER: 125:123688
TITLE: Anticancer substances prepared from materials extracted from medicinal plants or by organic synthesis method
INVENTOR(S): Ookawa, Naoshi; Aeba, Keizo; Ogawa, Noryuki; Goto, Tomohiro
PATENT ASSIGNEE(S): Neos Kk, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08119866	A2	19960514	JP 1994-255575	19941020

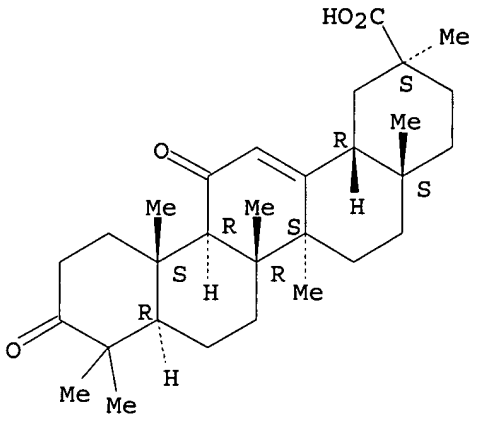
OTHER SOURCE(S): MARPAT 125:123688

AB Anticancer 3-Ketooleanolic acid, 3-Ketoursolic acid, 3-Ketoglycyrrhetic acid, 3-keto-20(S)-protopanaxadiol, 3-keto-20(R)-protopanaxadiol, 3-keto-20(S)-protopanaxatriol, 3-keto-20(R)-protopanaxatriol, 3-ketopanaxadiol, and 3-ketopanaxanetriol are prepd. with materials extd. from medicinal plants or prepd. by the org. synthesis method. As an example, leaves of Butula pulatyphylla Sukacthev var. japonica were extd. and the ext. was processed to obtain 3-.alpha.-20(S)-protopanaxadiol, which was reacted to yield 3-keto-20(S)-protopanaxadiol. The substances inhibited the growth of mouse melanoma cells in cultures.

IT **7020-50-0**, 3-Ketoglycyrrhetic acid
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(anticancer substances prepd. with materials extd. from medicinal

plants or by org. synthesis method)
RN 7020-50-0 CAPLUS
CN Olean-12-en-29-oic acid, 3,11-dioxo-, (20.beta.)- (9CI) (CA INDEX NAME)

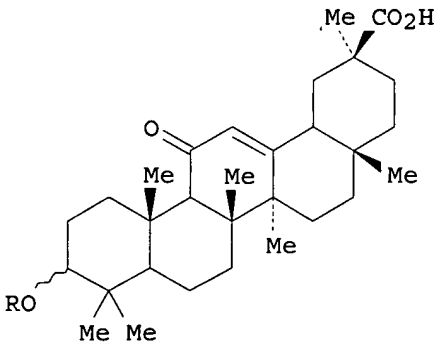
Absolute stereochemistry. Rotation (+).



L4 ANSWER 12 OF 49 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1996:67492 CAPLUS
DOCUMENT NUMBER: 124:165276
TITLE: Preventive and therapeutic agents for bone diseases containing glycyrrhetinic acid compounds
INVENTOR(S): Kiso, Yoshinobu; Kodama, Tooru; Myagawa, Katsuro; Nakahara, Koichi
PATENT ASSIGNEE(S): Suntory Ltd, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07291857	A2	19951107	JP 1994-124755	19940427

GI



I

AB The agents of the invention contain glycyrrhetinic acid compds. I (R = H, glycosyl), 3-dehydroglycyrrhetinic acid, or their physiol. acceptable salts as active ingredients. The agents are useful for treatment of malignant hypercalcemia, bone Paget's disease, and osteoporosis.

Glycyrrhizin (II) inhibited PTHrp(1-34)-induced release of Ca and inorg. P from cultured newborn mouse cranium. Capsules contg. II and candies contg. licorice root powder were also formulated.

IT **7020-50-0**

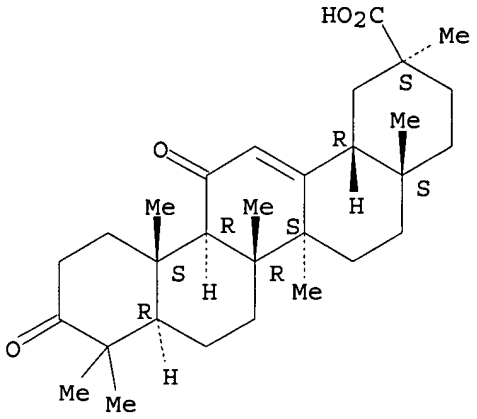
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(bone absorption disease inhibitors contg. glycyrrhetinic acid, its glycosides, or dehydroglycyrrhetinic acid)

RN 7020-50-0 CAPLUS

CN Olean-12-en-29-oic acid, 3,11-dioxo-, (20.beta.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



L4 ANSWER 13 OF 49 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1995:902554 CAPLUS

DOCUMENT NUMBER: 123:313554

TITLE: 2-Iodoxybenzoic acid oxidation of hydroxyl groups to carbonyls

INVENTOR(S): Frigerio, Marco; Santagostino, Marco

PATENT ASSIGNEE(S): Sigma-Tau Industrie Farmaceutiche Riunite S.p.A., Italy

SOURCE: Ger., 9 pp.
CODEN: GWXXAW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 4343054	C1	19950524	DE 1993-4343054	19931216
EP 658533	A1	19950621	EP 1994-119234	19941206
EP 658533	B1	19980415		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
AT 165074	E	19980515	AT 1994-119234	19941206
ES 2115141	T3	19980616	ES 1994-119234	19941206
JP 07285905	A2	19951031	JP 1994-333897	19941216
US 5510538	A	19960423	US 1994-356971	19941216

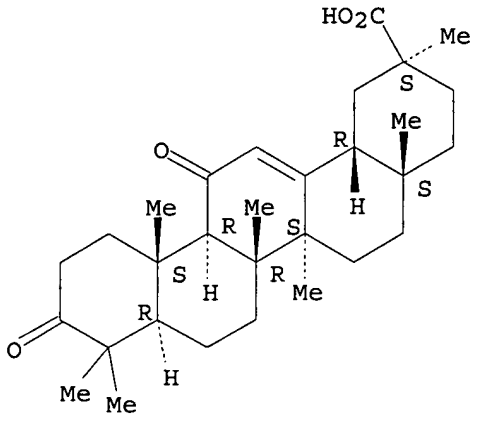
PRIORITY APPLN. INFO.: DE 1993-4343054 19931216
IT 1994-RM604 19940922

AB The title process takes place in a DMSO-contg. medium. Thus, (-)-borneol was stirred 2.5h with 2-(O2I)C6H4CO2H in DMSO to give 100% (-)-camphor. 1,2-Diols are cleanly oxidized to to diketones or ketols. Oxidn. of a wide variety of compd. types was described in 26 examples.

IT **7020-50-0P**

RL: SPN (Synthetic preparation); PREP (Preparation)
(2-Iodoxybenzoic acid oxidn. of hydroxyl groups to carbonyls)
RN 7020-50-0 CAPLUS
CN Olean-12-en-29-oic acid, 3,11-dioxo-, (20.beta.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



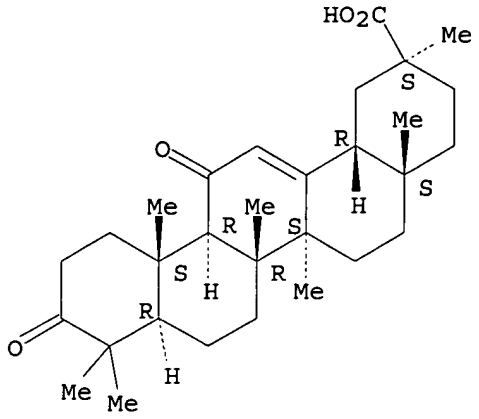
L4 ANSWER 14 OF 49 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1995:881363 CAPLUS
DOCUMENT NUMBER: 123:285513
TITLE: Process for the oxidation of primary and secondary alcohols to aldehydes and ketones and for the oxidation of 1,2-diols to alpha-ketols and alpha-diketones using o-iodoxybenzoic acid
INVENTOR(S): Frigerio, Marco; Santagostino, Marco; Sputore, Simona
PATENT ASSIGNEE(S): Sigma-Tau Industrie Farmaceutiche Riunite S.p.A., Italy
SOURCE: Eur. Pat. Appl., 13 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 658533	A1	19950621	EP 1994-119234	19941206
EP 658533	B1	19980415		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
DE 4343054	C1	19950524	DE 1993-4343054	19931216

PRIORITY APPLN. INFO.: DE 1993-4343054 19931216
IT 1994-RM604 19940922

AB Using 2-iodoxybenzoic acid, primary (e.g., PhCH2OH) or secondary alcs. are resp. oxidized to aldehydes (e.g., PhCHO) or ketones and 1,2-diols are oxidized to .alpha.-ketols or .alpha.-diketones.
IT **7020-50-0P**, Olean-12-en-30-oic acid, 3,11-dioxo-
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(process for the oxidn. of primary and secondary alcs. to aldehydes and ketones and for the oxidn. of 1,2-diols to alpha-ketols and alpha-diketones using o-iodoxybenzoic acid)
RN 7020-50-0 CAPLUS
CN Olean-12-en-29-oic acid, 3,11-dioxo-, (20.beta.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



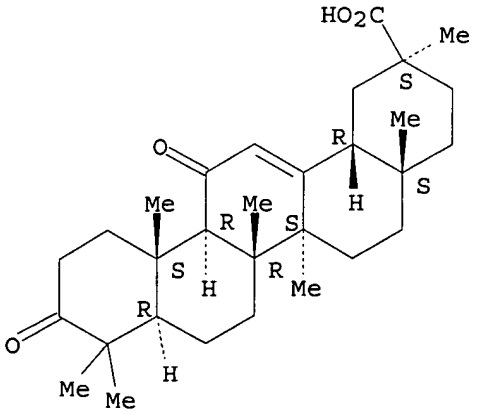
L4 ANSWER 15 OF 49 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1995:686165 CAPLUS
DOCUMENT NUMBER: 123:138758
TITLE: Studies on chemical constituents of Glycyrrhiza uralensis Fisch
AUTHOR(S): Shen, Feng-Jia; Hu, Jin-Feng; Yu, Ya-Chuan; Xu, Zhi-Dong
CORPORATE SOURCE: Department Chemistry, lanzhou University, lanzhou, 730000, Peop. Rep. China
SOURCE: Gaodeng Xuexiao Huaxue Xuebao (1995), 16(4), 572-4
CODEN: KTHPDM; ISSN: 0251-0790
PUBLISHER: Gaodeng Jiaoyu Chubanshe
DOCUMENT TYPE: Journal
LANGUAGE: Chinese

AB Six compds. were isolated from the roots of Glycyrrhiza uralensis and their structures were identified by chem. and spectroscopic methods. Three of them are new: 6"-O-acetylliquiritin, 3.beta.-formylglabrolide, and 22.beta.-acetylglabric acid; the others are known compds.: 2,3-dihydroisoliquiritigenin, 3-oxo-glycyrrhetic acid, and 3-acetylglycyrrhetic acid, which were obtained from the plant for the first time.

IT **7020-50-0**, 3-Oxo-glycyrrhetic acid
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(chem. constituents of Glycyrrhiza uralensis)

RN 7020-50-0 CAPLUS
CN Olean-12-en-29-oic acid, 3,11-dioxo-, (20.beta.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



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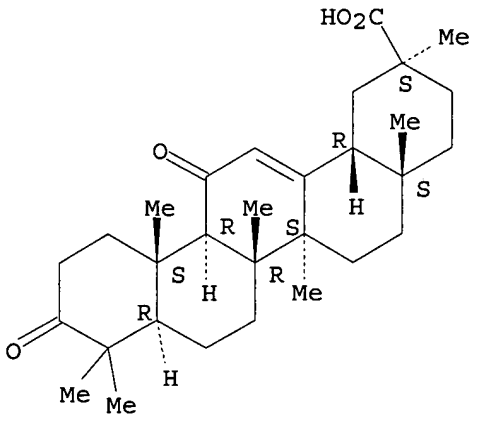
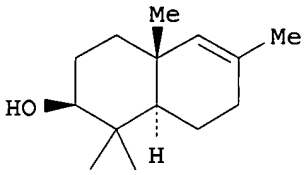
L4 ANSWER 16 OF 49 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1995:219694 CAPLUS
DOCUMENT NUMBER: 122:23347
TITLE: Antitumor triterpenes from medicinal plants
AUTHOR(S): Ryu, Shi Yong; Choi, Sang Un; Lee, Seung Ho; Lee, Chong Ock; No, Zaesung; Ahn, Jong Woong
CORPORATE SOURCE: Korea Res. Inst. Chem. Technology, Taejeon, 305-606, S. Korea
SOURCE: Archives of Pharmacal Research (1994), 17(5), 375-7
CODEN: APHRDQ; ISSN: 0253-6269
PUBLISHER: Pharmaceutical Society of Korea
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Thirteen naturally occurring or derivatized triterpenes, reported to have an antitumoral property, were reinvestigated on the basis of their direct cytotoxicity or the inhibitory activity on cell growth against five kinds of cultured human tumor cells, i.e., A-549, SK-OV-3, SK-MEL-2, XF498 and HCT15, in vitro. Ursonic acid, betulinic acid, betulonic acid and glycyrrhetinic acid exhibited a marked inhibition of cell growth.
IT **7020-50-0**, 3-Oxoglycyrrhetinic acid
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(antitumor activity triterpenes from medicinal plants against human cells)
RN 7020-50-0 CAPLUS
CN Olean-12-en-29-oic acid, 3,11-dioxo-, (20.beta.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



L4 ANSWER 17 OF 49 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1994:579878 CAPLUS
DOCUMENT NUMBER: 121:179878
TITLE: Terpenoid chirons: preparation and transformations of 2-hydroxy-1,1,4a(R),6-tetramethyl-trans-.DELTA.5,6-octalin
AUTHOR(S): Falck, J. R.; Manna, Sukumar; Chandrasekhar, S.
CORPORATE SOURCE: Southwest. Med. Cent., Univ. Texas, Dallas, TX, 75235, USA
SOURCE: Tetrahedron Letters (1994), 35(13), 2013-16
CODEN: TELEAY; ISSN: 0040-4039
DOCUMENT TYPE: Journal

LANGUAGE: German
OTHER SOURCE(S): CASREACT 121:179878
GI



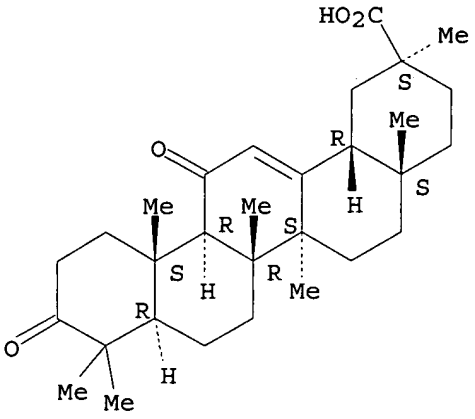
I

AB The octalin I and its 2.alpha.-isomer are prepd. conveniently from com. 18.beta.-glycyrrhetinic acid by Jones oxidn., thermolysis in presence of 3-tert-butyl-4-hydroxy-5-methylphenyl sulfide (sic), and stereoselective redn. I was converted to a variety of functionalized trans-AB ring chirons for terpenoids.

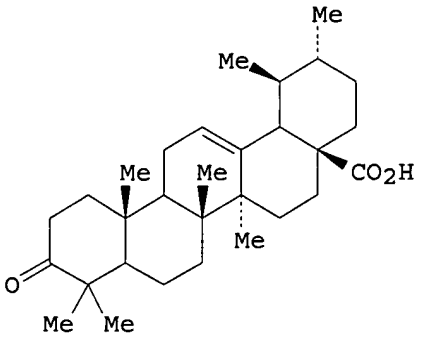
IT **7020-50-0P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction of, in prepn. of tetramethyloctalinol terpenoid chirons)

RN 7020-50-0 CAPLUS
CN Olean-12-en-29-oic acid, 3,11-dioxo-, (20.beta.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



L4 ANSWER 18 OF 49 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1994:315178 CAPLUS
DOCUMENT NUMBER: 120:315178
TITLE: Antiviral activity of triterpenoid derivatives
AUTHOR(S): Ryu, Shi Yong; Lee, Chong Kyo; Ahn, Jong Woong; Lee, Seung Ho; Zee, Ok Pyo
CORPORATE SOURCE: Korea Res. Inst. Chem. Technol., Taejeon, 305-606, S. Korea
SOURCE: Archives of Pharmacal Research (1993), 16(4), 339-42
CODEN: APHRDQ; ISSN: 0253-6269
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



I

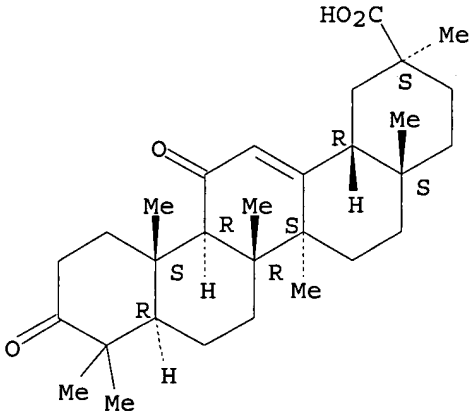
AB 3-Oxo or/and 11-oxo derivs. of natural 3-hydroxy triterpenes, i.e., 3-oxoursolic acid (I), 11-oxoursolic acid, 3,11-dioxoursolic acid, 3-oxobetulinic acid and 3-oxopomolic acid were exhibited to show an increased anti-HSV-1 activity in vitro, four to ten times as much as corresponding parent 3-hydroxy compds.

IT **7020-50-0P**, 3-Oxoglycyrrhetinic acid
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. and antiviral activity of, structure in relation to)

RN 7020-50-0 CAPLUS

CN Olean-12-en-29-oic acid, 3,11-dioxo-, (20.beta.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



L4 ANSWER 19 OF 49 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1994:212297 CAPLUS

DOCUMENT NUMBER: 120:212297

TITLE: Transformation of glycyrrhizic acid by Aspergillus spp

AUTHOR(S): Yamada, Yasumasa; Nakamura, Atsuko; Yamamoto, Kiyoko; Kikuzaki, Hiroe

CORPORATE SOURCE: Dep. Food Sci., Doshisha Women's Coll. Liberal Arts, Kyoto, 602, Japan

SOURCE: Bioscience, Biotechnology, and Biochemistry (1994), 58(2), 436-7
CODEN: BBBIEJ; ISSN: 0916-8451

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Glycyrrhizic acid was metabolized to 3-oxo-18.beta.-glycyrrhetinic acid via 18.beta.-glycyrrhetinic acid by Aspergillus niger, A. oryzae, A. sojae, and A. tamarii. Two Me esters were derived from these two

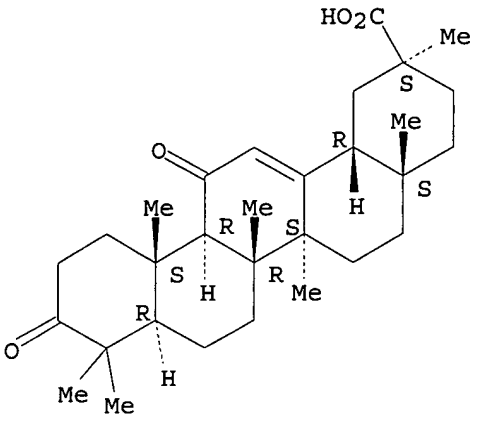
metabolites and identified by their 13C-NMR spectra and MS data.

IT **7020-50-0**
RL: FORM (Formation, nonpreparative)
(formation of, by Aspergillus)

RN 7020-50-0 CAPLUS

CN Olean-12-en-29-oic acid, 3,11-dioxo-, (20.beta.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



L4 ANSWER 20 OF 49 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1994:30971 CAPLUS

DOCUMENT NUMBER: 120:30971

TITLE: Total synthesis of the spiro-o-benzoquinonefuran (-)-stypoldione

AUTHOR(S): Falck, J. R.; Chandrasekhar, S.; Manna, Sukumar; Chiu, Ching Chen S.; Mioskowski, Charles; Wetzel, Isabelle

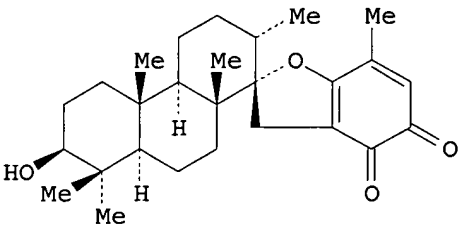
CORPORATE SOURCE: Southwest. Med. Cent., Univ. Texas, Dallas, TX, 75235, USA

SOURCE: Journal of the American Chemical Society (1993), 115(24), 11606-7
CODEN: JACSAT; ISSN: 0002-7863

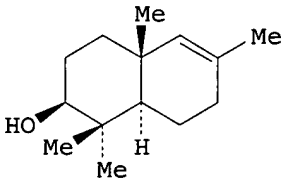
DOCUMENT TYPE: Journal

LANGUAGE: English

GI



I

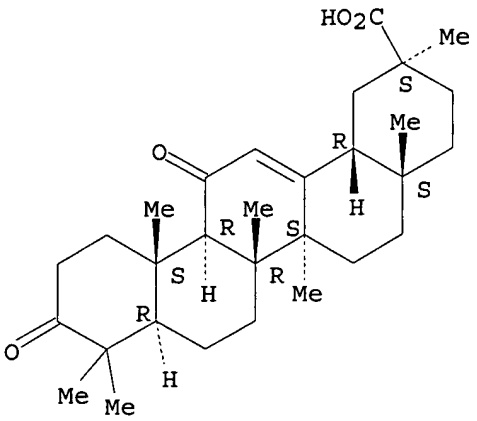


II

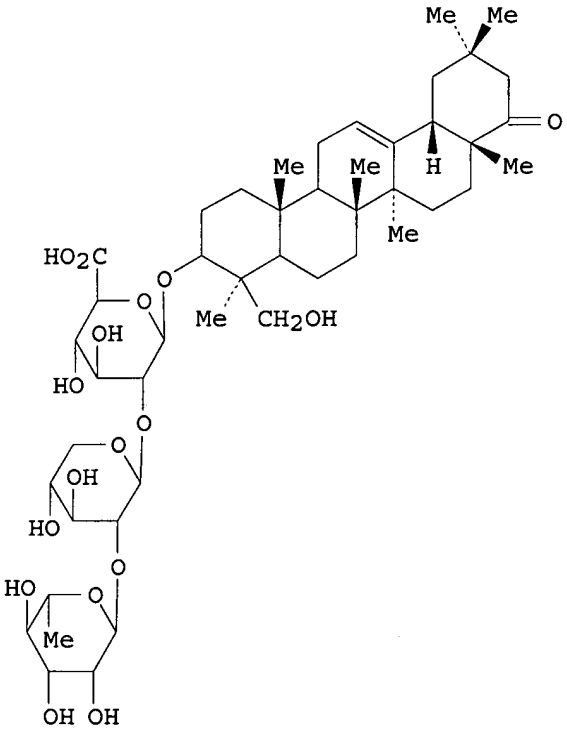
AB Stypoldione (I) is the most prominent member of a rare class of marine pentacyclic diterpenoids characterized by an unusual spiro-o-benzoquinone furan moiety. The described asym. total synthesis highlights methodol. for (i) the utilization of the chiral AB-ring unit II excised from com. .beta.-glycyrrhetinic acid, (ii) elaboration of an .alpha.-sulfenyl cyclohexanone leading to ring C via ring expansion using (phenylthiomethylidene)triphenylarsorane, and (iii) heteroatom spiro-annulation to create the furanoid ring D. Final deprotection and oxidn. to an ortho-quinone using Fremy's salt afforded I.

IT **7020-50-0**
RL: RCT (Reactant); RACT (Reactant or reagent)
(thermolysis of)
RN 7020-50-0 CAPLUS
CN Olean-12-en-29-oic acid, 3,11-dioxo-, (20.beta.)- (9CI) (CA INDEX NAME)

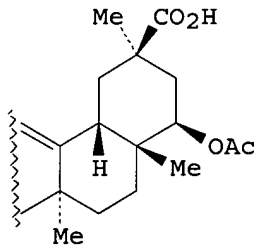
Absolute stereochemistry. Rotation (+).



L15 ANSWER 34 OF 59 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1991:628320 CAPLUS
DOCUMENT NUMBER: 115:228320
TITLE: Constituents of leguminous plants, XIII. New triterpenoid saponins from Wistaria brachybotrys
AUTHOR(S): Konoshima, Takao; Kozuka, Mutsuo; Haruna, Mitsumasa; Ito, Kazuo
CORPORATE SOURCE: Kyoto Pharm. Univ., Kyoto, 607, Japan
SOURCE: Journal of Natural Products (1991), 54(3), 830-6
CODEN: JNPRDF; ISSN: 0163-3864
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



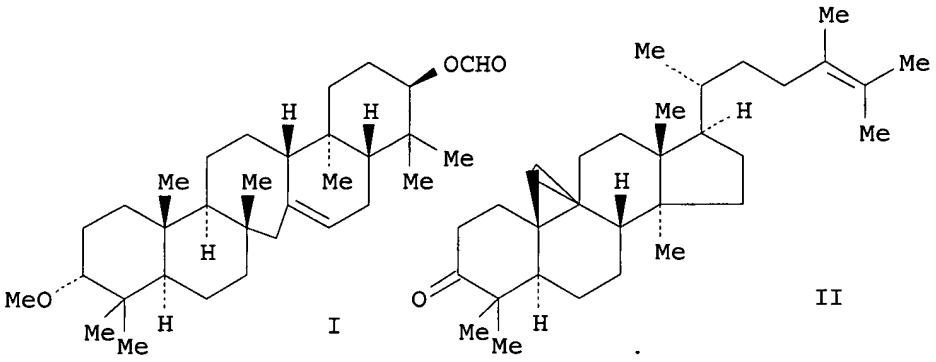
I



II

AB Two new **triterpenoid** saponins, wistariasaponins D (I) and G (II), and the known saponin dehydrosoyasaponin I were isolated from the knots of Wistaria brachybotrys. The structures of I and II were determined from their chemical and physicochem. evidence. The inhibitory effects of these saponins on the activation of **Epstein-Barr** virus early antigen that was induced by a tumor promoter were also tested for the primary screening of antitumor-promoting activities.

L15 ANSWER 20 OF 59 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:812001 CAPLUS
DOCUMENT NUMBER: 134:83490
TITLE: Bioactive triterpenoids from the stem bark of Picea glehni
AUTHOR(S): Tanaka, Reiko; Kinouchi, Yoshitaka; Tokuda, Harukuni; Nishino, Hoyoku; Matsunaga, Shunyo
CORPORATE SOURCE: Department of Medicinal Chemistry, Osaka University of Pharmaceutical Sciences, Osaka, Japan
SOURCE: Planta Medica (2000), 66(7), 630-634
CODEN: PLMEAA; ISSN: 0032-0943
PUBLISHER: Georg Thieme Verlag
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



AB Two new **triterpenoids**, 3α-methoxyserrat-14-en-21β-yl formate (I), and 24-methylcycloartenone (II), were isolated from the stem bark of Picea glehni (Fr. Schm.) Masters together with three known **triterpenoids**, 3α-methoxyserrat-14-en-21β-ol, 3β-methoxyserrat-14-en-21β-ol, and piceanonol A. I and II, and a synthetic sample, 3α-methoxyserrat-13-en-21β-yl formate showed potent inhibitory effects on **Epstein-Barr** virus early antigen (EBV-EA) activation induced by the tumor promoter 12-O-tetradecanoylphorbol-13-acetate (TPA).

REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 52 OF 59 MEDLINE on STN
ACCESSION NUMBER: 1999334720 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10408235
TITLE: Anti-carcinogenic activity of Taraxacum plant. II.
AUTHOR: Takasaki M; Konoshima T; Tokuda H; Masuda K; Arai Y; Shiojima K; Ageta H
CORPORATE SOURCE: Kyoto Pharmaceutical University, Japan.
SOURCE: Biological & pharmaceutical bulletin, (1999 Jun) Vol. 22, No. 6, pp. 606-10.
Journal code: 9311984. ISSN: 0918-6158.
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199909
ENTRY DATE: Entered STN: 19990925
Last Updated on STN: 19990925
Entered Medline: 19990914

AB Eleven **triterpenoids** (1-11) from the roots of Taraxacum japonicum (Compositae) were examined for their inhibitory effects on **Epstein-Barr** virus early antigen (EBV-EA) induced by the tumor promoter, 12-O-tetrade-canoylphorbol-13-acetate (TPA), in Raji cells as a primary screening test for anti-tumor-promoters (cancer chemopreventive agents). Of these **triterpenoids**, taraxasterol (1) and taraxerol (7) exhibited significant inhibitory effects on EBV-EA induction, but the inhibitory effects of their acetates 2 and 8 were weaker than those of 1 and 7. Furthermore, 1 and 7 exhibited potent anti-tumor-promoting activity in the two-stage carcinogenesis tests of mouse skin using 7,12-dimethylbenz[a]anthracene (DMBA) as an initiator and TPA as a promoter, and 1 showed a remarkable inhibitory effect on mouse spontaneous mammary tumors using C3H/OuJ mouse. These results strongly suggested that taraxasterol (1) could be a valuable chemopreventive agent.

L15 ANSWER 57 OF 59 MEDLINE on STN
ACCESSION NUMBER: 95004242 MEDLINE
DOCUMENT NUMBER: PubMed ID: 7920430
TITLE: Inhibitory effects of cucurbitane **triterpenoids** on **Epstein-Barr** virus activation and two-stage carcinogenesis of skin tumors.
AUTHOR: Konoshima T; Takasaki M; Tatsumoto T; Kozuka M; Kasai R; Tanaka O; Nie R L; Tokuda H; Nishino H; Iwashima A
CORPORATE SOURCE: Kyoto Pharmaceutical University, Japan.
SOURCE: Biological & pharmaceutical bulletin, (1994 May) Vol. 17, No. 5, pp. 668-71.
Journal code: 9311984. ISSN: 0918-6158.
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199410
ENTRY DATE: Entered STN: 19941222
Last Updated on STN: 19941222
Entered Medline: 19941025

AB To search for possible anti-tumor-promoters, we carried out a primary screening of 21 cucurbitane **triterpenoids** using an in vitro assay system. Of these **triterpenoids**, scandenoside R6 (6), 23,24-dihydrocucurbitacin F (14), 25-acetyl-23,24-dihydrocucurbitacin F (15), 2-O-beta-D-glucopyranosyl-23,24-dihydrocucurbitacin F (17) and cucurbitacin F (18) exhibited significant inhibitory effects on **Epstein-Barr** virus (EBV) activation induced by the tumor promoter, 12-O-tetradecanoyl-phorbol-13-acetate (TPA). Further, compounds 14 and 17 exhibited remarkable anti-tumor-promotion effects on mouse skin tumor promotion in an in vivo two-stage carcinogenesis test.

L14 ANSWER 6 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1994:153711 CAPLUS
DOCUMENT NUMBER: 120:153711
TITLE: Tumor promotion inhibitors containing glycyrrhetic acid monoglucuronide
INVENTOR(S): Kozuka, Mutsuo; Tokuda, Harukuni; Mizutani, Kenji; Tamura, Kokichi; Kuramoto, Takashi
PATENT ASSIGNEE(S): Maruzen Seiyaku Kk, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05306228	A2	19931119	JP 1992-129884	19920424
JP 3163161	B2	20010508		
PRIORITY APPLN. INFO.:			JP 1992-129884	19920424

AB Tumor promotion inhibitors contain **glycyrrhetic** acid monoglucuronide (I) or its water-soluble salts as active ingredient. TPA-induced formation of **Epstein-Barr** virus early antigen was inhibited by I [at 1000 (by mol.) to TPA] by 100%, vs. 84.4% by **glycyrrhetic** acid.